Modern packaging

Nominated for *Packaging's Hall of Fame*®. Story on Page 78

October 1951

● *"you name it... I helped make it!"*

Glue for toasted labels

Something quite new again. A heat-sealing glue! That lets bottle labeling machines run 2 to 3 times faster. It works like this: Glue is applied and dried on the back of labels before they are printed. The label is heated in the bottling machine to make the glue tacky. The label is placed against the bottle. Held firmly in place. The glue cools. And the label is locked tight to the bottle. All, automatically. In a flash!

... and we're finding new uses for heat-sealing every day.

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TO PAPER
TO BOARD
TO RAYON THREAD FOR MAKING RIBBONS
TO CELLULOSE ACETATE, AS SCRIM REINFORCING FOR GLASS SUBSTITUTE (Chicken Coop Windows)

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TO BOARD
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(Aluminum)

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Modern packaging

Vol. 25 No. 2 October 1951

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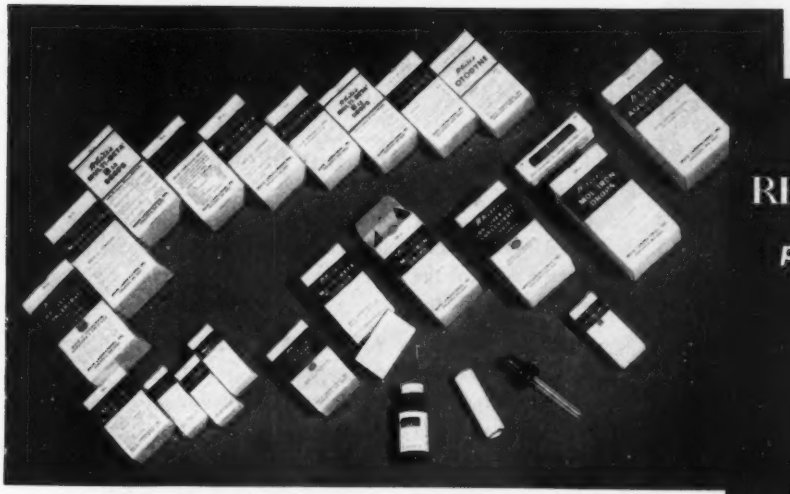

1 REDINGTON packages 21 items in 8 carton sizes!

You would expect it to take several different machines to package, efficiently and fast, all the above products and items produced by White Laboratories Inc. of Kenilworth, N. J. But, the *single* REDINGTON Type 23 illustrated below . . . specially adapted for exceptional flexibility . . . automatically cartons all 21 items, together with several inserts.

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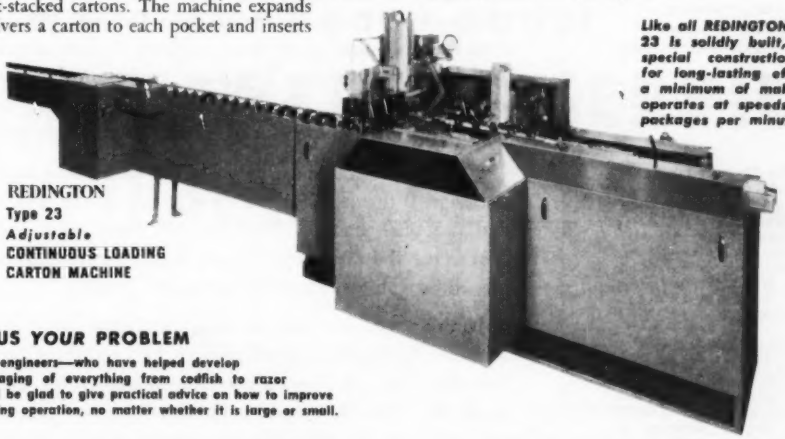
Magazine changes and other adjustments for different package sizes are quickly made.



Like all REDINGTONS, this Type 23 is solidly built, with many special construction features, for long-lasting efficiency and a minimum of maintenance. It operates at speeds up to 120 packages per minute.

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Type 23
Adjustable
CONTINUOUS LOADING
CARTON MACHINE

*

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Modern packaging

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EDITORIAL

Why the big package?

WITH THIS ISSUE for the first time each subscriber to MODERN PACKAGING receives a rather remarkable bonus —a free copy of the very new *Modern Packaging Encyclopedia* for 1952.

This edition of the *Encyclopedia*, our sister publication of many years' standing, represents a distinct change of plan—in format, in content and in distribution. Placing it in the hands of every MODERN PACKAGING subscriber, where we know it will be welcomed and used, is a part of this plan for greater service. Here's how it came about:

When the 1951 *Encyclopedia* appeared a year ago, the publishers felt that their efforts to produce a complete source book on packaging—renewed yearly since 1929—had about reached perfection; that the basic information had become sufficiently standardized so that an annual edition was, perhaps, no longer justified.

Two things happened to change their minds: (1) the 1951 edition was no more than off the press than it was sold out, leaving a still-unsatisfied demand for this type of reference information; (2) the cold war grew hot and the gradual shift to a mobilization economy created a pressing need for *special* information on war-time packaging—not merely military packaging, but the problems of keeping civilian packaging lines going during critical supply periods.

The new, streamlined *Encyclopedia* which you now have is designed to meet both of these needs in the most direct and practical manner. How this has been done and how best to use the *Encyclopedia* and Directory are explained in the editors' foreword, which is "must" reading.

To those who may miss the handsome bindings of previous *Modern Packaging Encyclopedias*, the publishers say this: that they have deliberately sacrificed luxury for utility to make this book of greater usefulness to more people. The circulation of the 1952 *Encyclopedia* is already double that of any previous edition.

We think this is a move that fits the times. We hope it meets with your approval.

The Editors

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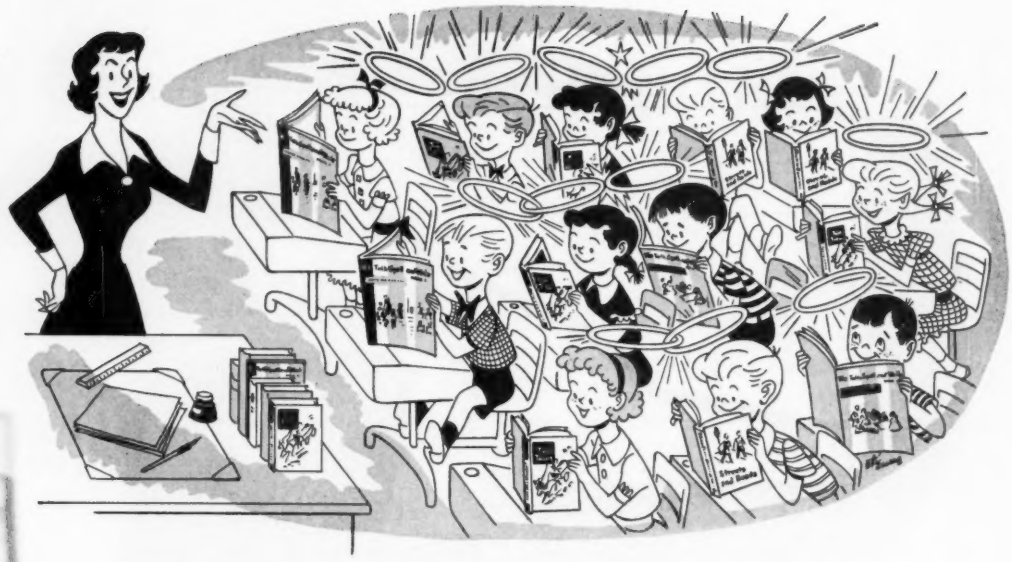

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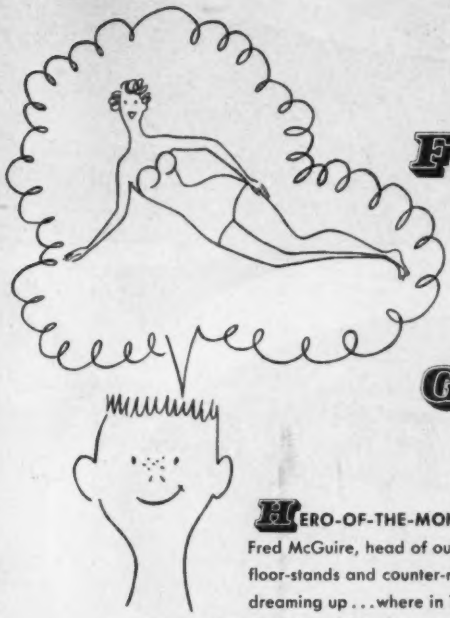

FREDDIE LIKES GIRLS!

HERO-OF-THE-MONTH at Gibraltar is an otherwise pleasant chap named Fred McGuire, head of our Impossible Dept. "Fred," we said, "these floor-stands and counter-merchandisers your nimble little fingers are forever dreaming up . . . where in Tophet do you get your ideas? They're so—how do you say in English—so ingenious, so maddeningly irresistible, so—so basic. . . ."

"I LIKE GIRLS," Fred began. "Yes, yes," we quickly parried, "like 'em ourself. Married one. But where do you get your ideas?"

"GIRLS!" Fred persisted. "You said — ingenious — irresistible — basic. I like girls. When I think of girls I get wonderful ideas. How basic can you get!"

WE YIELDED to the simple logic of it. Ingenious — irresistible — basic — both merchandising displays *and* girls. That's only the beginning. Been to a supermarket lately? The bids for That Vagrant Buying Impulse range from furious to fantastic. It's true not only of "maybe" merchandise; more soap, another can of beans, extra paper toweling. It goes for "must" merchandise too; the meat'n potatoes. In Self-Service Selling the best bids get the business.

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GIBRALTAR makes ingenious, maddeningly irresistible, basic merchandising displays. Do you have a selling problem? We *have* a selling answer.

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There's a transparent rigid plastic showcase box for *your* specialty item also. To increase sales, to preserve quality, or to simplify your packaging and merchandising operations—follow the lead of the nation's foremost packagers of foods, confections, class and mass merchandise of every kind. Package in rigid plastic! You may select a beautiful Tri-State Rigid Plastic Box from our wide range of stock sizes and shapes, or we will mold to your specifications.

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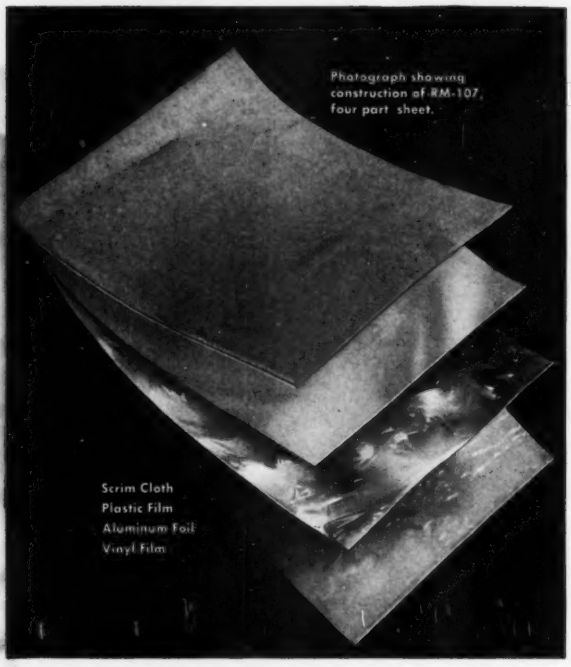

New Four-Part Sheet Approved under AN-B-20

REYNOLDS RM-107 consists of four materials stoutly bonded with special adhesives. Scrim backing provides toughness; plastic film, flexibility; the .001 Reynolds Aluminum Foil, perfect moisture-vapor and water-vapor protection; the vinyl sheet, perfect sealing.

This is the ideal barrier for protecting motors, generators, tanks and other military items packaged by the "Floating Barrier Method"—specification approved as Type II material under AN-B-20, Barrier, Flexible Sheet Moisture Vapor. REYNOLDS RM-107 is used extensively by the aeronautical agencies of the army and navy and is their equivalent to MIL-B-131A (JAN-P-131).

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FREE SAMPLES

Upon request, free samples are available to manufacturers and converters for preparing their qualification samples. This applies not only to RM-107, but to other Reynolds Military Barrier materials: RM-240, approved under JAN-P-117, type II (replacing AR-61); RM-260, approved under JAN-117, type I (replacing AR-63); RM-201, approved under MIL-R-1504 (replacing A-90).

REYNOLDS METALS COMPANY
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REYNOLDS METALS

REYNOLDS

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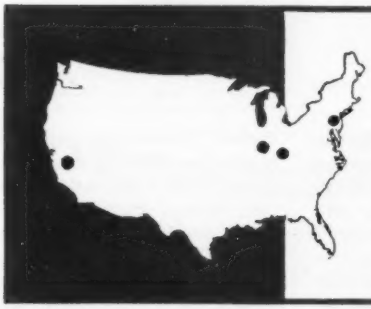
REYNOLDS "FIGHTING FOIL"

Military developments in Reynolds Aluminum Foil open up great new opportunities for the "civilian defense" of foods and all perishable goods: protective packaging to meet any situation. But above and beyond this defense of product quality is the supreme selling-power of aluminum foil...the irresistible eye-appeal of rich colors on bright metal... the shopper-stopper display value that makes aluminum the "Brightest Salesman" in this supermarket age.

Reynolds has led in developing and making the most of this Brightest Salesman. Reynolds designers are specialists in the unique values of foil. Working directly with Reynolds own large rotogravure printing operations, they bring out these values to maximum effect.

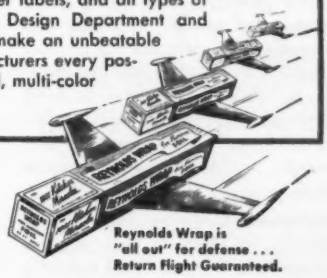
This complete service is at your disposal for future planning. Call any Reynolds Office listed under "ALUMINUM" in your classified Phone Directory. You'll be signing up "The Brightest Salesman"... the salesman that sells every second of every supermarket day... Reynolds Aluminum Foil.



FOR YOUR PAPER LABELS AND WRAPS USE THE NATION'S LARGEST ROTOGRAVURE PRINTERS

Reynolds, the largest supplier of beer labels, has four large modern printing plants, strategically located across the country. Supplied with continuous tonnages of quality paper, Reynolds offers superior service on paper labels, and all types of large run printing. Reynolds Design Department and unequalled printing facilities make an unbeatable combination, assuring manufacturers every possible advantage in high-speed, multi-color gravure production.

ALUMINUM



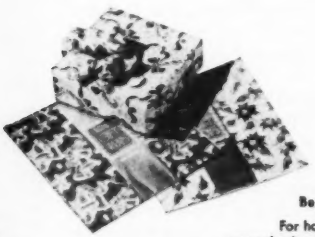
Reynolds Wrap is "all out" for defense... Return Flight Guaranteed.

Stock Bags

for prepackaging fresh produce and thousands of other items at the retail level.

For Frozen Foods

Sales curves soar when frozen foods are offered in attractively printed overwraps.



Benmont Gift Wraps

For holiday wrappings at any sales level and for home use. Widely distributed through all major variety chains.

To make sales grow... call on the GREEN THUMB

Just as the gardener's magic touch makes plants grow... Dobeckmun's *Green Thumb* grows sales!

We mean the ingenuity and skill that we apply to creating a package with powerful *sales impact*—always, of course, combined with the desired protection for product quality. From these various materials, laboratory tested to meet product requirements and climatic conditions, we produce lightweight, flexible packages that make sales grow:

Cellophane: Single or duplex bags, printed or plain, in flats, squares or satchels. Printed sheets and rolls for wraps and overwraps. Converted cellulose acetate films.

Metalam**: Heat-sealing lamination of aluminum foil and supporting film. Brilliantly printed in multi-color. Especially suitable for unit or sample packaging, for "thirsty" hygroscopic products. Can be formed, loaded and sealed at high speed on automatic machines. Especially high display value.

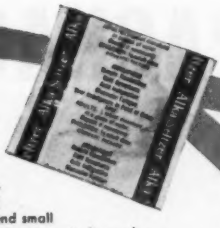
Polyethylene: Alone or laminated to paper or other desired materials. Printed or plain. Flat and square bags, sheets, roll stock.

Pliofilm**: Transparent, heat-sealing plastic film. Water-proof, moisture-vapor-proof, tough and wear-resistant. Plain or printed in handsome multi-color bags, sheets or rolls.

Zip-Tape**: Opening tape for film packages. High value as good-will builder, saying an adroit "thank you" to every purchaser. Applied by simple, economical device, easily attached to existing packaging machines. In colors, plain, printed, opaque or transparent.

Overwraps

Brilliantly printed transparent films add sales appeal to packages containing textiles, novelties, frozen foods, fresh produce—anything that requires a semiflexible package.



Metalam

Printed lamination of film and foil for large and small units of drugs, pharmaceuticals, surgical dressings and other military or civilian products.

Duplex Brilliant*

Lamination of film and light weight paper for decoration and protection. *Plasticolor** Cover—laminated film and cover stock, for inside dividers and other package use.

Zip-Tape

Opens almost any cellophane package quicker and easier. Pleases customers. Available in bright colors to add attractiveness as well as high utility.

Metalam Ration Units

For condensed or dehydrated foods and beverages, where complete moisture-proof protection is required to protect quality and taste of contents.

Benbar Barrier Materials

Polyethylene-coated Kraft papers, for grease-proof protection of metal or other products of any size or shape.

Metalam Barrier Materials

Laminated films and foils, for complete protection against moisture, corrosion and other damaging elements.

APPROVED MILITARY PACKAGING MATERIALS

For fabrication by your own suppliers, we make many combinations, such as Benbar* polyethylene-coated Kraft paper, Metalam and other laminations, for packaging military products from unit rations to airplane motors. Ask for samples, specifications and special brochure "Barrier Materials".

***Duplex Brilliant**:* Lamination of film to lightweight paper, in nine sparkling, soil-proof colors; for attractive and effective labels, box coverings and package wraps. Plain or printed.

While deliveries on some of these materials are currently restricted, *our ideas are free.* For successful cultivation of present or future markets, let us put our *Green Thumb* to work for you.

THE DOBECKMUN COMPANY

Cleveland 1, Ohio Berkeley 2, Calif. Bennington, Vt.

Dobeckmun
CREATIVE CONVERTERS OF FILMS AND FOILS

Sales offices in: Atlanta, Boston, Chicago, Cincinnati, Detroit, Indianapolis, Los Angeles, Milwaukee, New York, Philadelphia, Pittsburgh, Portland, Rochester, St. Louis, St. Paul and Seattle. Representatives everywhere.

*T. M. The Dobeckmun Company
**T. M. The Goodyear Tire and Rubber Company

RADO PACKAGING SYSTEM

Some of the packages produced by Technopol Laboratories, Ltd., London, E. C. 1.

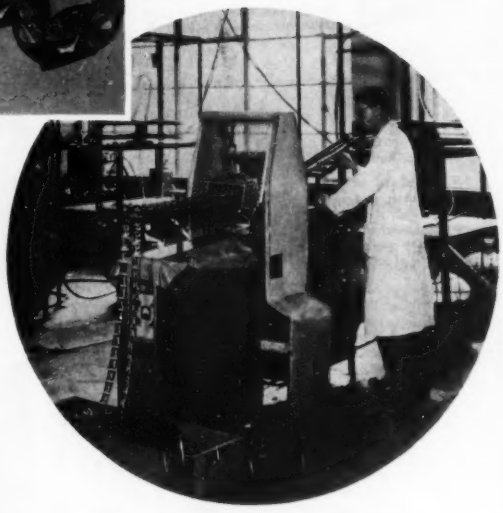
U. S. A. Patent Nos.
2,517,027, 2,530,400

British Patent Nos.
599174, 599183.

Patents in 36 other countries and further patents pending.

THE RADO PACKAGING PROCESS is for the production of liquid or paste-filled containers from any thermoplastic material. Containers of different shapes and sizes can be produced with the same machine, which is quickly adjustable. A new type of collapsible tube can be produced continuously. This new collapsible tube has no screw-cap and is provided with a self-sealing aperture to expel there-through portions of the contents.

If you have substances to be packed or you are interested in the process and machinery, communicate with the factories in your relative countries where Packaging Service Stations are at your disposal and where you can see the plants in operation; otherwise ask for further information from:



Type "A" Packaging Machine (produces sixty 18 cc packages per minute)

TECHNOPOL LABORATORIES LIMITED

212 St. John Street, LONDON, E. C. 1, England

Factories and Packaging Service Stations:

GREAT BRITAIN: TECHNOPOL LABORATORIES LTD.
Head Office and Factory
212 St. John Street, LONDON, E.C.1
Tel: London Wall 9452-9453
(Cables and Telegrams TELABOR-LONDON)

FRANCE: (Algiers, Tunis, Morocco)
S. E. P. (Soc. d'Emballages Plastiques)
Office: 87 Rue Notre-Dame-des-Champs, PARIS 6e. Telephone ODEON 71-33.
Factory: 24 Avenue de la Republic. CHATOU, France. Tel: 274.

BELGIUM: (Holland, Luxembourg, Belgian Congo)
S. E. P. (Soc d'Expansion des Matieres Plastique)
Office: 41 Rue de La Vallee, (Onderbergen), GAND. Tel: 594.96.
Factory: 68-7 Rue de l'Agrafe, Anderlecht, BRUSSELS. Tel: 22,19,32.

SWITZERLAND: GISIGER & CO.
Office: Claridenhof, Dreikonigstrasse 21, ZURICH. Tel: (051) 27.24.47/ 25.00.30.
Factory: Obfelden.

EIRE: TECHNOPOL LABORATORIES (EIRE) LTD., 81/2 Aungier Street, DUBLIN. Tel. Dublin 53524.

MILLS PLASTIC Bottles

shape up to build product sales

CUSTOM BOTTLES—Give free play to your imagination in planning the use of custom shaped ~~MILLS PLASTIC~~ BOTTLES for your products. By combining our engineering and molding skill with our exclusive patented process, we can produce bottles in a surprisingly wide variety of shapes and sizes—and in virtually endless colors. We also make closures and atomizers to your special needs.

STOCK BOTTLES—Feather-light Polyethylene stock bottles are available in two styles: Mills "Cylinder" in 2-4-6-8 ounces; Mills "Oblong" in 2-4 ounces. Both styles are available in natural Polyethylene or your preferred color. Atomizers, closures and tubing are also available in stock styles and sizes.

Let us or our sales agent show you how we can create product selling bottles for you today.

Manufactured under Patent No. 2,515,093. Other patents pending.

ELMER E. MILLS CORPORATION
2930 NORTH ASHLAND AVENUE • CHICAGO 13, ILLINOIS

Sales agent for the United States: **W. BRAUN & CO., CHICAGO:** 300 N. Canal St. • **NEW YORK:** 715 Fifth Ave. **DETROIT:** 139 W. Maple, Birmingham, Mich.

The CARTON BUYER May Not Know . . .

. . . that "make-ready" is one of the most important steps in carton manufacturing. So that your printing plates make "good impressions" we attach a great deal of importance to very carefully leveling and laying the plates.

Every form is put together by printing craftsmen who are never in too big of a hurry to slight the importance of perfect "make-ready"

ACE CARTON CORPORATION

5800 West 51st Street • Chicago 38, Illinois

Phones: POrtsmouth 7-1111

ACE
Packaging that **ATTRACTS** *is the Packaging that* **SELLS**

Laying plates on Patent Base. | The feeding end of a two-color press. | The delivery end of a two-color press. | The male cutting and creasing die.

PRODUCERS OF PROTECTIVE PACKAGING

WAXED PAPERS • LAMINATED ALUMINUM FOIL • BARRIER MATERIALS
ROLLS, SHEETS, BAGS

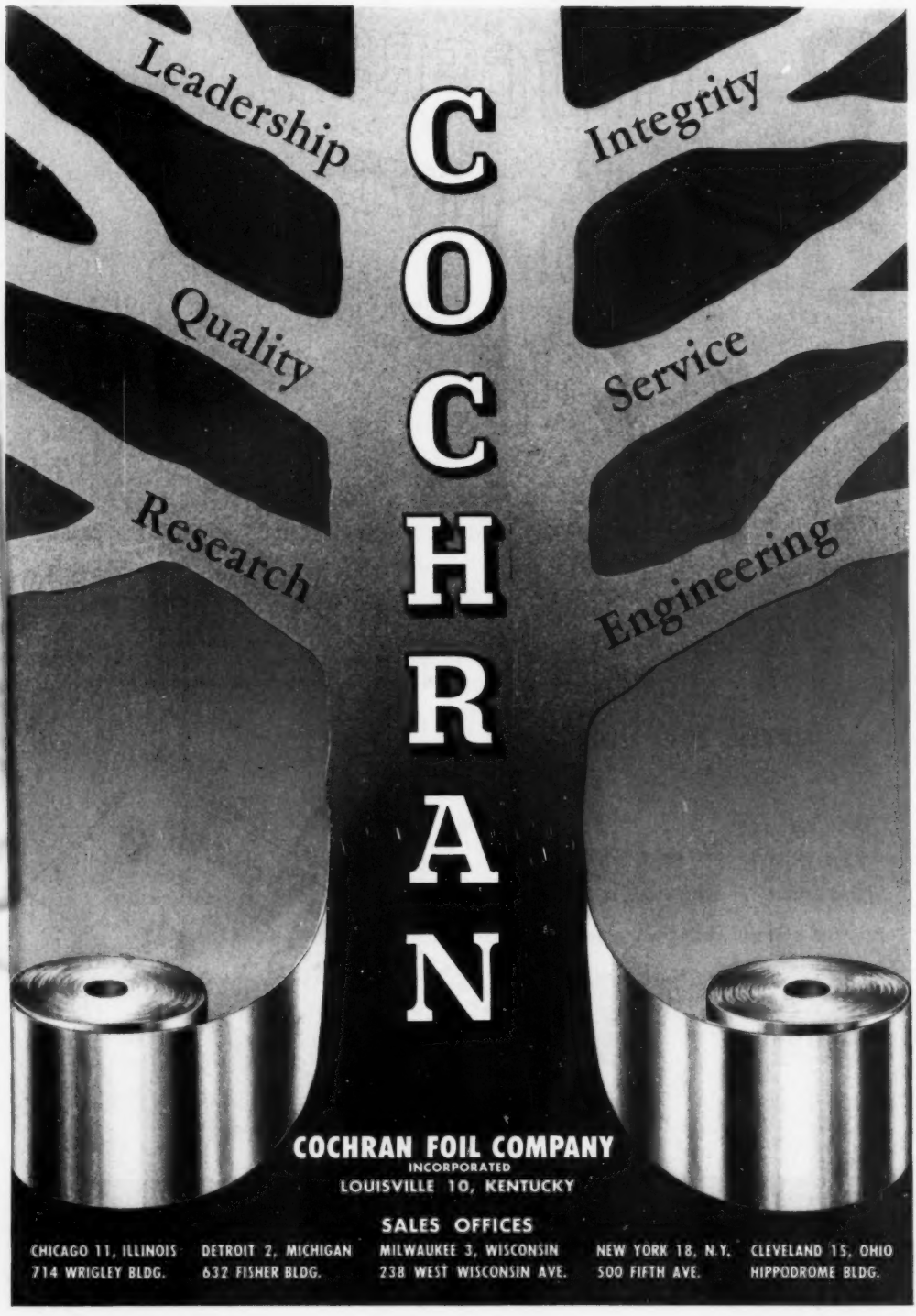
PERSONAL ATTENTION Half a century of know-how and still growing, assures attention to your requirements — large or small.

QUALITY Integrated production — our own paper mill gives Quality Control at the source, which guarantees Uniformity.

We welcome your using our Packaging, Research and Designing Service — without obligation.

NEWARK PARAFFINE & PARCHMENT PAPER CO.

50 JELLIFF AVENUE, NEWARK 8, N. J. • MILLS AT NEWARK, N. J. and PITTSTON, PA.


Leadership
Quality
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COCHRAN
Integrity
Service
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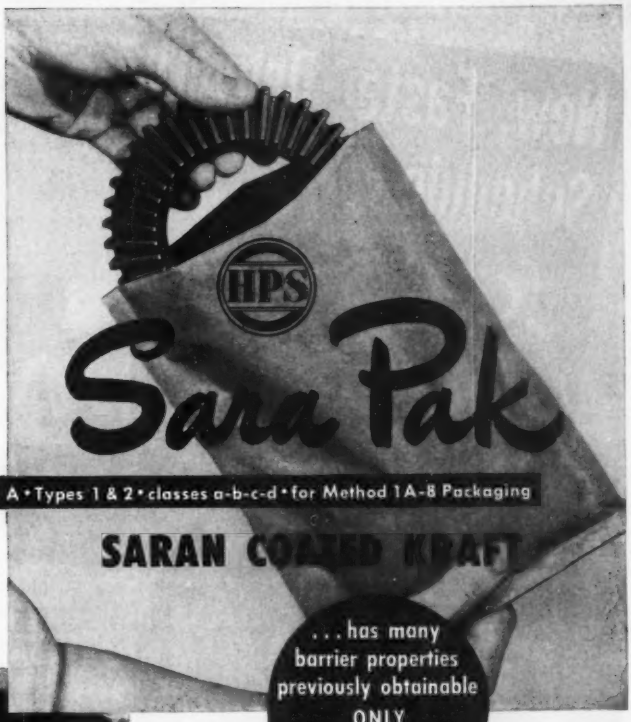
COCHRAN FOIL COMPANY
INCORPORATED
LOUISVILLE 10, KENTUCKY
SALES OFFICES
CHICAGO 11, ILLINOIS
714 WRIGLEY BLDG.
DETROIT 2, MICHIGAN
632 FISHER BLDG.
MILWAUKEE 3, WISCONSIN
238 WEST WISCONSIN AVE.
NEW YORK 18, N.Y.
500 FIFTH AVE.
CLEVELAND 15, OHIO
HIPPODROME BLDG.

HERE'S WHY

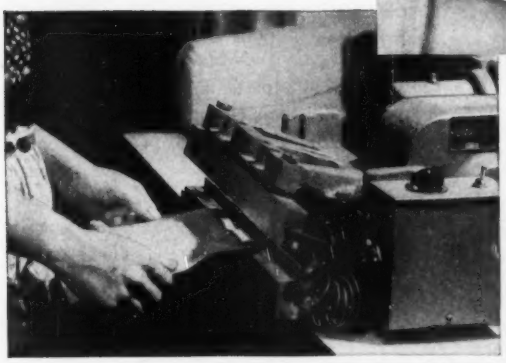
Buyers of HEAT SEALED Bags and Pouches ARE SWITCHING TO

A NEW ORGANIC MEMBRANE BARRIER



meets class "d" JAN-P-117 • GRADE A • Types 1 & 2 • classes a-b-c-d • for Method 1A-8 Packaging

. . . has many barrier properties previously obtainable ONLY with a metallic membrane



HEAT SEALABLE • GREASEPROOF • WATERPROOF • MOISTURE-VAPORPROOF

plus these Use-Tested Advantages:

✓ **Non-Cracking**
Sara Pak shapes easily, stays pliable, does not harden or brittle, withstands rough handling without fracturing.

✓ **Positive Heat-Sealed Closure**
Saran unites perfectly with base stock; 2 mils coating is also heat seal medium, giving 4 mils closure adhesion; seals fast.

✓ **High Wet Strength Kraft**
Saran Coated Sara Pak has low WVTR; withstands limited immersion in water.

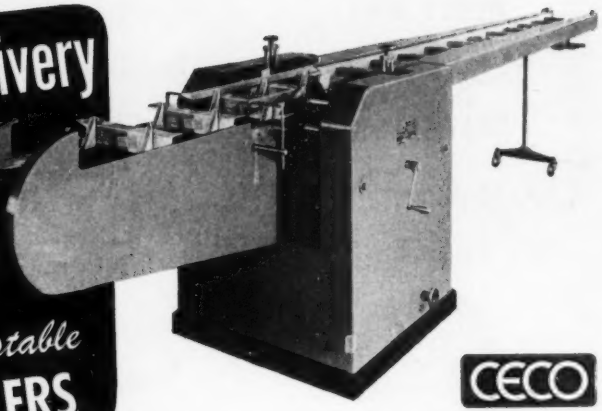
✓ **Resists Nearly All Chemicals**
such as acids, alkalies, solvents, synthetic oils and greases over wide temperature range.

✓ **Lower in Cost–Ask Your Fabricator**
or write us for samples and list of bag and pouch suppliers.

H. P. SMITH PAPER CO.
MANUFACTURERS
IMPREGNATORS · LAMINATORS · FOIL · FABRIC · PAPER · COATERS

Pioneers in Developing Protective Barrier Materials
5009 W. Sixty-Sixth Street, Chicago 38, Illinois.

New, Faster Delivery Schedule For CECO Adjustable CARTON SEALERS



CARTON SEALER
MODEL A-3901-12

Illustrating the versatility of Model A3901-12 CECO Adjustable Carton Sealer are the variety of carton sizes and shapes which one machine can seal.

CECO Adjustable Carton Sealers give the final touch of perfection to products packed in cartons. Both ends of the cartons are glue-sealed automatically, producing neat, clean, tamperproof packages in keeping with the quality of the contents.

CECO Carton Sealers can be adjusted instantly without tools for an infinite variety of carton sizes by unskilled help. Quantity production has brought the cost of CECO Adjustable Carton Sealers down to a point where even the smallest concern can enjoy the economy of mechanized packaging. These compact, versatile, portable machines should save enough in labor alone to repay your small investment in a year.

Write, wire or phone for details, prices, and new, faster delivery schedule.

Features

- ★ Adjustable instantly for different sizes and speeds without tools.
- ★ Handles any free-flowing, non-sifting product.
- ★ Seals both ends automatically, simultaneously.
- ★ Produces square, neat, tamper-proof cartons.
- ★ Portable, self-contained.
- ★ Automatic carton feed available.

CONTAINER EQUIPMENT CORPORATION

Packaging Machinery Specialists

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MEMBER, PACKAGING MACHINERY MANUFACTURERS INSTITUTE

CONTAINER EQUIPMENT CORPORATION

Package design hits a new high
with SYLVANIA®
CELLOPHANE
TAKE the wraps off imagination. Specify Sylvania Cellophane for your packaging. This versatile, economical film lends itself to almost any design . . . enhances the appearance . . . gives needed protection to almost any product. It comes with controlled moisture protection—in different gauges. In hand-wrapping or on high speed automatic equipment it heat seals strongly and instantaneously. It can be economically printed on fast presses with lustrous color effects.
Sylvania is always ready to help you with your packaging problems. Discuss them with your Sylvania representative or write us mentioning the specific application in which you are interested. Address: Market Development, Dept. MP-10

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Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 1617 Pennsylvania Blvd., Philadelphia 3, Pa. *Plant:* Fredericksburg, Va.

AN ORIGINAL LITHOGRAPH BY HENRY E. WINZENREID

"Down by the Old Mill Stream . . ."*

The old community grist mill of yesteryear is a far cry from today's great centralized mills that send a wide variety of fine flours to every part of the country. Along the way, many of these special flours need the help of protective packaging papers to preserve their wholesome goodness . . . papers of the type Riegel has carefully developed for this growing industry.

There are many other Riegel Papers for almost any packaging need . . . papers that are now serving the sales leaders in many different fields . . . attractive papers you can depend on for economy and production efficiency. We are constantly developing even more varieties, in spite of present conditions, for companies who join us in planning for the future. Write us now for information.

Riegel Paper Corporation • 342 Madison Avenue, New York 17, New York.

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Riegel TAILOR-MADE PAPERS FOR PROTECTIVE PACKAGING

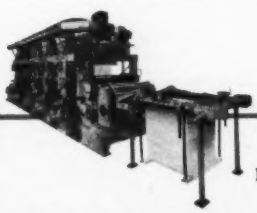
Heard how P. A.* cuts costly waste?

You save time, trouble and expensive web material with the P. A. (Pendulum Action impression) of ATF-Klingrose rotogravure presses. P. A. keeps the web under uniform tension at all times, eliminating wasteful slack. Web tension control is automatic at all press speeds and for all circumference cylinders. An impression is set once for each color and is not touched again regardless of stops and starts. The tension remains constant whether press is printing, idling or standing. P. A. is only one of many exclusive features of ATF-Klingrose rotogravure presses designed to handle every type of rotogravure printing.

The P. A. multicolor rotogravure press shown here is ideal for printing gift wraps, decorative papers, labels, bread, soap and candy wraps, and similar articles. It also prints on cellophane, glassine, foil, kraft, tissue, lightweight board. Investigate the complete line of ATF-Klingrose rotogravure presses and learn how you, too, can profit by their around-the-clock dependability and economy of operation.

AMERICAN TYPE FOUNDERS, *Klingrose Gravure Division*, 19 Rector Street, New York 6, New York.

*An exclusive ATF-Klingrose feature



ATF

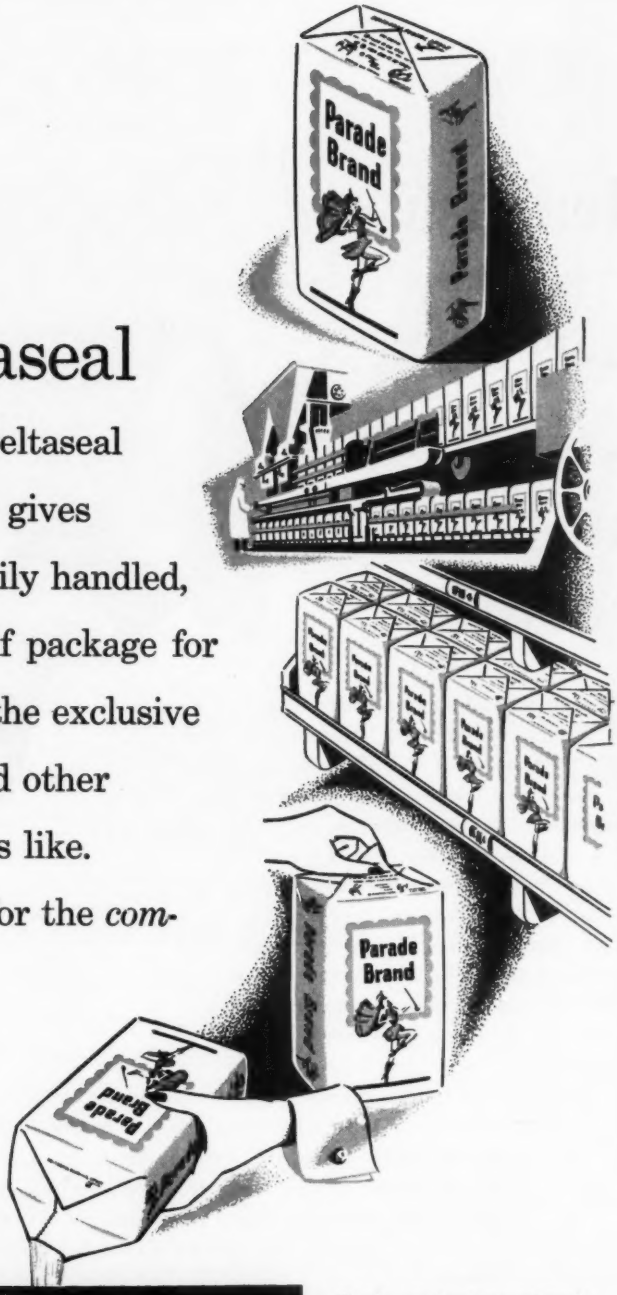
BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

GRAVURE . . . LETTERPRESS . . . OFFSET

Type faces shown are: Century Bold, Century Schoolbook

Bemis Deltaseal

(Deltaseal Bags plus Deltaseal Packaging Equipment) gives you an economical, easily handled, brilliantly printed shelf package for your product . . . with the exclusive pull-cut-pour spout and other features that customers like. Ask your Bemis Man for the *complete* Deltaseal story.



Bemis BEMIS BRO BAG COMPANY

Bemis—an American enterprise in business since 1858 . . . employing 10,000 men and women in 45 plants, mills and sales offices . . . in 28 states, coast to coast.

through 62 eventful years...

JOHNSTON

ALUMINUM TIN LEAD
COMPOSITION TIN AND LEAD

...has delivered the goods

THE GAY 1890's

THE NEW CENTURY 1900

FORTUNE AND FANCY 1910

PEACE AND PROSPERITY 1920

HUNGER AND DEPRESSION 1930

WORLD CONFLAGRATION 1940

SCIENCE AND SECURITY? 1950-51

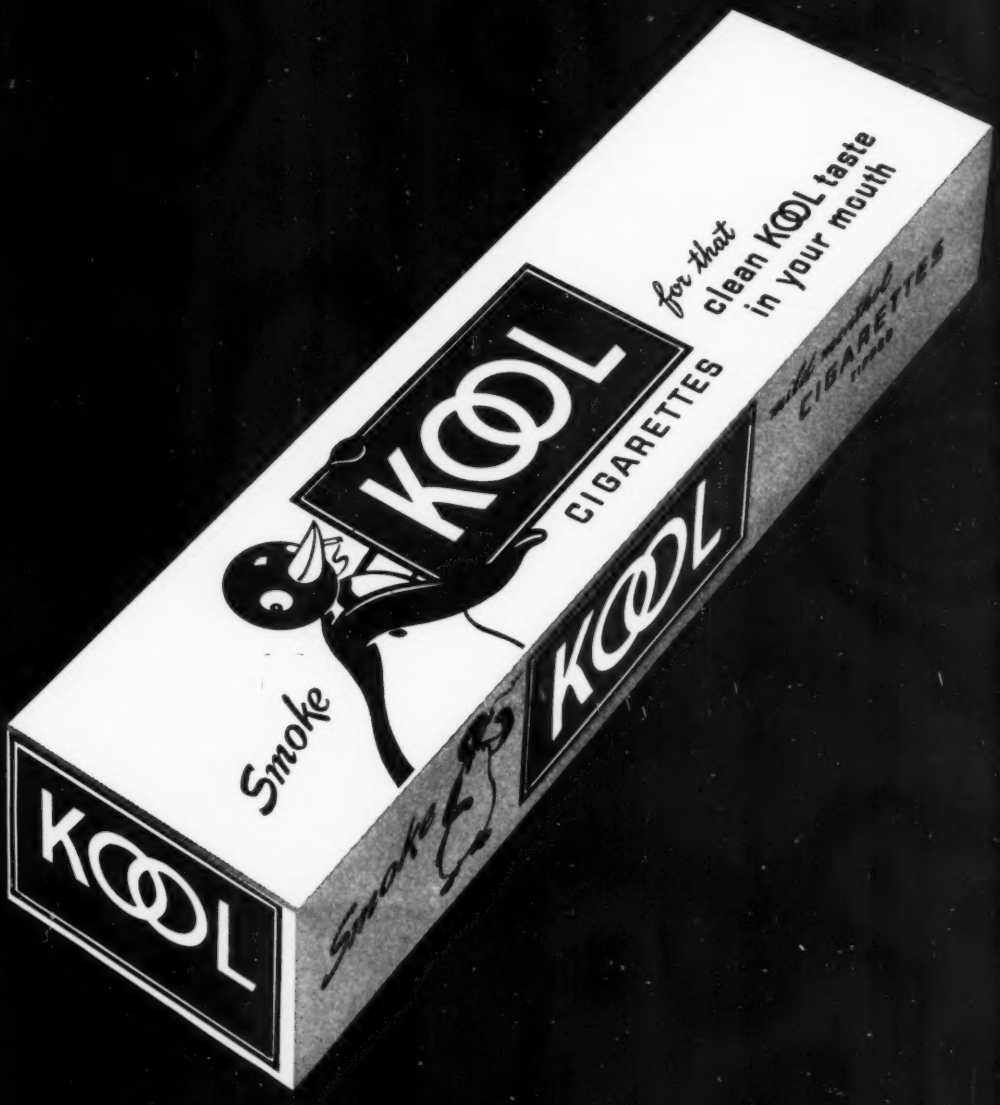
JOHNSTON has helped America live through 62 years of Peace and War. Our service now, as in the past, is ever widening and ever alert to the changing requirements of modern merchandising. We manufacture aluminum, tin, lead and composition tin and lead foil for your variable and specific purposes.

what are **YOUR** *needs?*

JOHNSTON FOIL MANUFACTURING CO.

6016 6298 S. BROADWAY ST. LOUIS 11, MO.

SALES OFFICES



From the Gardner Gallery of famous American Packages

NOT A

When a company's list of customers begins to read like the Blue Book of American Business, you can be sure a lot more than coincidence is involved.

We think there is a pretty definite reason why Gardner has been chosen to supply the boxboard and folding cartons for so many of America's most famous products.

And that reason is not alone our acres of mills and factories and precision equipment. It's that here at Gardner we believe in never being quite satisfied with a good job. We feel an obligation to ourselves – and to our customers – to do even better tomorrow, what we do supremely well, today.

THE GARDNER BOARD AND CARTON CO.

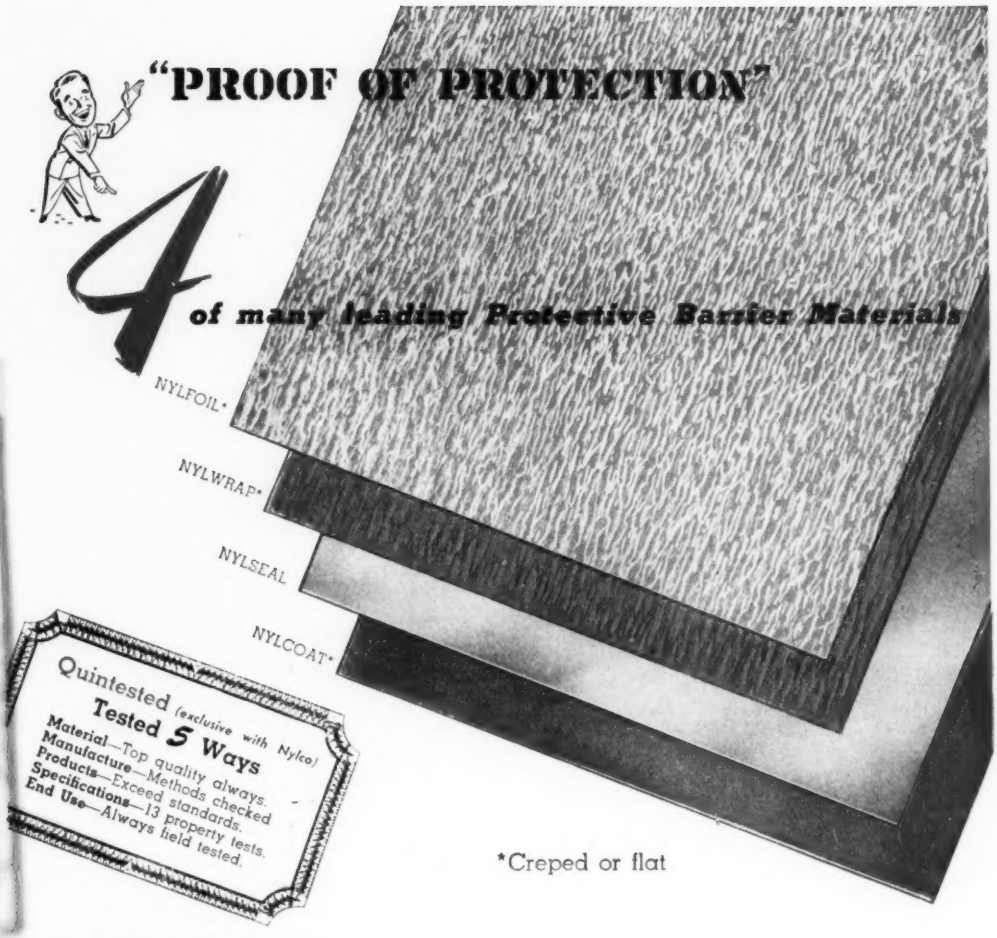
Manufacturers of Folding Cartons and Boxboard

GENERAL OFFICES: Middletown, Ohio – PLANTS: Middletown, Ohio; Lockland (Cincinnati), Ohio
Sales Offices in Boston, Chicago, Cleveland, New York, Philadelphia, Pittsburgh, St. Louis

GARDNER

"PROOF OF PROTECTION"

4 of many leading Protective Barrier Materials



Quintested (exclusive with Nylco)
Tested 5 Ways
Material—Top quality always.
Manufacture—Methods checked
Products—Exceed standards.
Specifications—13 property tests.
End Use—Always field tested.

*Creped or flat

Military Packaging
Let us help you with your military packaging. We manufacture barrier materials to conform to specifications.

MIL **JAN** **AN**

Get this Free colorful swatch and specification book today.

DESIGNED FOR USE
NYLCO
WHERE PROTECTION COUNTS

Protective Barrier Materials
NYLCO PRODUCTS, INC.
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Write today for free Packaging Helps — File Folder #111

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Leonard Barol & Associates
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Allied Commodities Co.
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William Diemer & Co., Inc.
274 Madison Ave., New York 15.

Protective Packaging Co.
542 S. Dearborn St., Chicago 5.

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Nearly everything that sells, sells better in a window box

No economical packaging refinement can give a product as much added sales boost as a window. When the Table Talk Pastry Company of Worcester, Mass., put their tart pies in window boxes, sales increased five-fold! Dry Goods, Hosiery, Candy, Baked Goods, Fruits and Vegetables, Toys, Tools—everything that's reveal-packed in a window box sells better.

Don't plan your packaging without a window. Increased production of Celanese* *acetate* Transparent Film is making windows available for more and more products. Check your box manufacturer. Chances are he can supply you immediately. Celanese Corporation of America, Transparent Films Dept. 108-J, 180 Madison Ave., N. Y. 16.

*Reg. U. S. Pat. Off.

In Canada, Canadian Cellulose Products, Ltd., Montreal and Toronto.

The finest windows are Celanese ACETATE

- **crystal clear, grainless**
- **always smooth and flat**
- **never cockle or wrinkle**
- **never pull box out of shape**
- **non-aging . . . non-drying**
- **perfect printing surface**

Celanese* Acetate

TRANSPARENT FILM

RATION PACK PRODUCED FOR MILITARY USE BY CONVERTERS THROUGHOUT THE COUNTRY

Traveling Light

THE LIGHT WEIGHT ration pack shown here is lined with Kaiser Aluminum Foil, and thus offers outstanding advantages to the converter as well as to a soldier.

TO THE CONVERTER, the use of rolls of high quality Kaiser Aluminum Foil means low-cost, automatic machine fabrication. The foil is easily laminated to the Kraft paper and is quickly heat-sealed with a durable bond.

TO THE SOLDIER, it means that provisions remain moisture-proof. If only part of the contents are used, air can be removed by simple pressure and the package re-sealed again and again by folding.

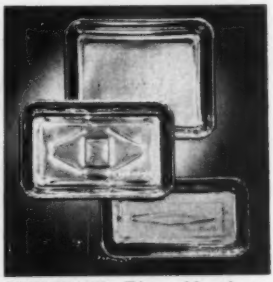
Many of these advantages of Kaiser Aluminum Foil can be applied to products such as pharmaceuticals, medicine, fluids, electronics, machinery.

Some of *your* customers can profit from these advantages. Call us now and we'll be glad to work with you. Sales offices in principal cities. Kaiser Aluminum & Chemical Sales, Inc., Oakland, California.

Kaiser Aluminum

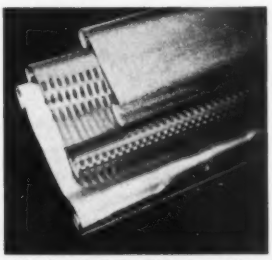
Setting the pace—through quality and service

100% PROTECTION—Milk bottle closures, made of Kaiser Aluminum Foil, protect pouring lip from dairy to glass. A health safeguard every milk company should adopt!



SALES-BUILDER—Disposable plates made from Kaiser Aluminum Foil, such as these designed for enchiladas, are quickly and evenly heated, due to aluminum's conductivity. Aluminum foil also adds sales appeal.

PRESERVES FRESHNESS—Wrapped in Kaiser Aluminum Foil, bread *keeps* its freshness. And aluminum foil's bright good looks helps increase sales.



GILDING A GIFT—Gift wrappings made from Kaiser Aluminum Foil in plain, embossed and printed patterns add an extra sparkle that spells more sales. Remember it!

It's not the same old baloney

How you *slice* it may not make a difference, but how you *package* it sure does. Standard has the package design and printing to perk up your product's appearance and make dealers want to feature it. And that goes for *any* merchandise which can be put up in flexible transparent packages or wraps.

COLOR-CRAFT

Standard

printing company

PRINTERS OF CELLOPHANE, ACETATE and GLASSINE SINCE 1936

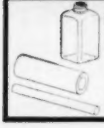
COLUMBUS, GEORGIA

Sales Offices: Dallas, Texas—Charlotte, N. C.—Jackson, Miss.

For The Blatz Brewing Company which uses Standard-Knapp packers and conveyors in its new bottling plant. "We certainly are happy," reports Blatz, "with the performance which our Standard-Knapp equipment has rendered during three years of operation in our new bottling plant. This department has recorded an amazingly high degree of efficiency in regular evaluations and much of that efficiency is due to the continued and dependable operation of Standard-Knapp packers."

Only the best is

OTHER EMHART PRODUCTS INCLUDE:



PLASTIC BOTTLES, RODS, TUBES, SPECIAL SHAPES

PLAX CORPORATION

Subsidiary of Emhart Mfg. Co.

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PREMIUM QUALITY STAMPING PRESSES

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HARTFORD 5, CONNECTICUT

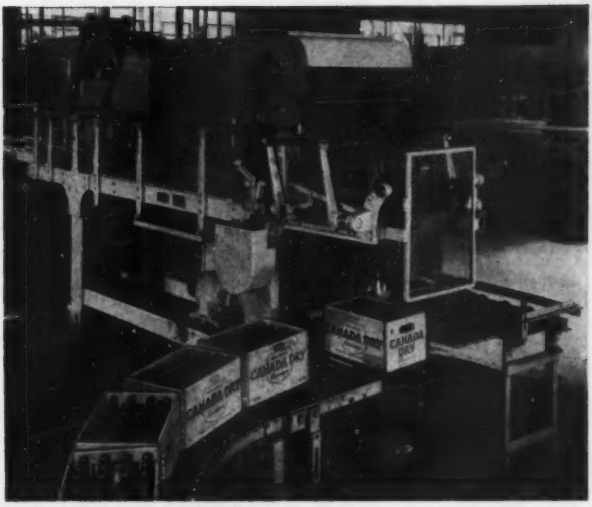
GLASS MAKING MACHINES

HARTFORD-EMPIRE CO.

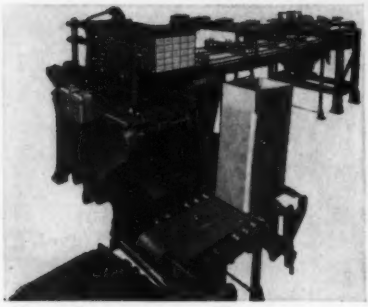
Division of Emhart Mfg. Co.

HARTFORD 2, CONNECTICUT

In the field of automatic packaging equipment



For Canada Dry where Standard-Knapp bottle packers help this famous company maintain its production lines at top efficiency. Standard-Knapp bottle packers—and other automatic packaging machines—are the choice of leaders in every field seeking speed and dependability now and for the years ahead.



For American Tobacco which keeps its packaging lines moving at peak efficiency with the aid of Standard-Knapp gluers and sealers, collectors and carton packers. In the field of automatic packaging, Standard-Knapp machines are automatically preferred.

For The Food Industry

Standard-Knapp machines are automatically and efficiently unloading empty bottles . . . rinsing glass containers . . . labelling cans and bottles . . . packing filled cans, bottles, cartons and bags into shipping cases . . . gluing and sealing shipping cases . . . printing, coding and dating.

good enough

FACT-PACKED CATALOGS

Want to review Standard-Knapp automatic packaging machines in detail? Our catalogs will give you some eye-opening facts. Please write Dept. P, Standard-Knapp, Portland, Connecticut.

STANDARD-KNAPP

DIVISION OF
EMHART MFG. CO.

PORTLAND, CONNECTICUT

ABSTRACT DESIGN?

No, it is a micro-photograph of one of nature's designs — paraffin wax crystals — a design reflected in MOORE & MUNGER's trademark, which represents a needle crystal superimposed on a plate crystal. The quality of MOORE & MUNGER's waxes is similarly a matter of deliberate design to give you the highest standards of quality and dependability.

M
M

REFINED PARAFFIN WAX
MICROCRYSTALLINE WAX
RUBBER WAX
SLACK AND SCALE WAXES

MOORE & MUNGER

33 Rector Street New York 6

Does your package land preferred position?

Making it easy for retailers to set up self-selling displays is vital today. A package that fits into simple, effective displays is bound to get preferred position in busy self-service stores.

How important this consideration can be is indicated by recent surveys in supermarkets. Two out of three purchases are decided *inside* the store, where displayed packages do nearly all the selling.

Does *your* present package lend itself to simple handling, quick price marking, easy stacking? This is one of twelve check points in "How To Rate Your Package Objectively," an easy-to-use guide for analyzing the self-selling job your package is doing. Write for this handy folder today. E. I. du Pont de Nemours & Co. (Inc.), Film Department, Nemours Building, Wilmington 98, Delaware.

DuPont Cellophane

Shows what it Protects—Protects what it Shows

DU PONT

REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

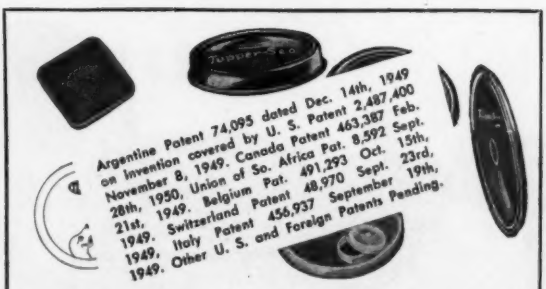
Tupper Seal, air and liquid tight flexible covers fit, and are included in the sets of all Tupperware Canisters.

The Tupperware 50 oz. Canister is "standard equipped" with the Tupper Seal, air and liquid-tight flexible Pour All cover.

The Tupper Seal, air and liquid-tight flexible Pour All cover is used on every Tupperware 20 oz. Canister.

The Tupper Seal, air and liquid-tight, Pour All cover as a cover for 46 oz. cans; Tupperware Sauce Dishes and other containers of metal, glass or pottery. Foods easily dispensed without removing entire cover.

The Tupperware Wonder Bowls are usually fitted with Tupper Seal, air and liquid-tight covers.


Argentine Patent 74,095 dated Dec. 14th, 1949 on invention covered by U. S. Patent 2,487,400 November 8, 1949. Canada Patent 463,387 Feb. 28th, 1950, Union of So. Africa Pat. 8,592 Sept. 21st, 1949. Belgium Pat. 491,293 Oct. 15th, 1949. Switzerland Patent 48,970 Sept. 23rd, 1949, Italy Patent 456,937 September 19th, 1949. Other U. S. and Foreign Patents Pending.

TUPPER! Seals

air and liquid-tight, flexible covers for Tupperware Tumblers, Canisters, Wonder Bowls, Cereal Bowls and many another container of glass, metal and pottery, the contents of which it is desired to keep fresh and wholesome.

TUPPER!

FORMAL NOTICE! 9th November, 1949

EXCLUSIVE!

U. S. Patent #2,487,400

The Tupper Corporation has attained a position of leadership in this industry by incurring great expense and expending painstaking effort in the development, design, manufacture and exploitation of its many world-known products.

The Tupper Corporation further has anticipated the inevitable attacks to which leadership is subject and has taken measures provided by law to preserve the creative rights to its products, methods and design by patent protection both in the United States and abroad.

Tupper Seals for Tupperware shown in this advertisement are just a few of the forms covered in this manner and are specifically covered by U.S. Patent #2,487,400.

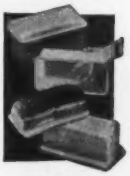
Only the Tupper Corporation, by U.S.Patent #2,487,400 has the right to make, use and vend container closures in connection with any and all types of containers throughout the United States and its territories as covered by the claims of the Patent.

Tupper Corporation will protect, according to law, the exclusive rights above granted

TUPPER CORPORATION

There's a Tupper Seal, air and liquid-tight flexible cover for Tupperware 2, 5, 8 and 12½ oz. Tumblers too, and these Tupper Seal, covers fit many other containers of metal, glass and crockery.

The Tupper Seal, air and liquid-tight flexible Por Top cover, specially designed as a dispensing cover for specified diameters of containers holding foods such as syrups, salad dressings, catsup.



The cover of the Tupperware Bread Server which serves as a bread tray also is designed to give similar results as Tupper Seal, air and liquid-tight Flexible covers. Keeps contents fresh as no other such container.

When equipped with Tupper Seal, air and liquid-tight, flexible covers, Tupperware Cereal Bowls serve many another purpose.

The Tupper Seal, air and liquid-tight flexible cover made for Tupperware 8 oz. Tumblers also fits and is sold with all Tupperware Funnels as a base when funnels are used as storage containers.

TUPPER CORPORATION

Manufacturers of — CONSUMER, INDUSTRIAL, PACKAGING AND SCIENTIFIC PRODUCTS

FACTORIES: Farnumsville, Mass., and Cuero, Texas **New York Show Rooms 225 Fifth Ave.**

ADDRESS ALL COMMUNICATIONS TO: Department A

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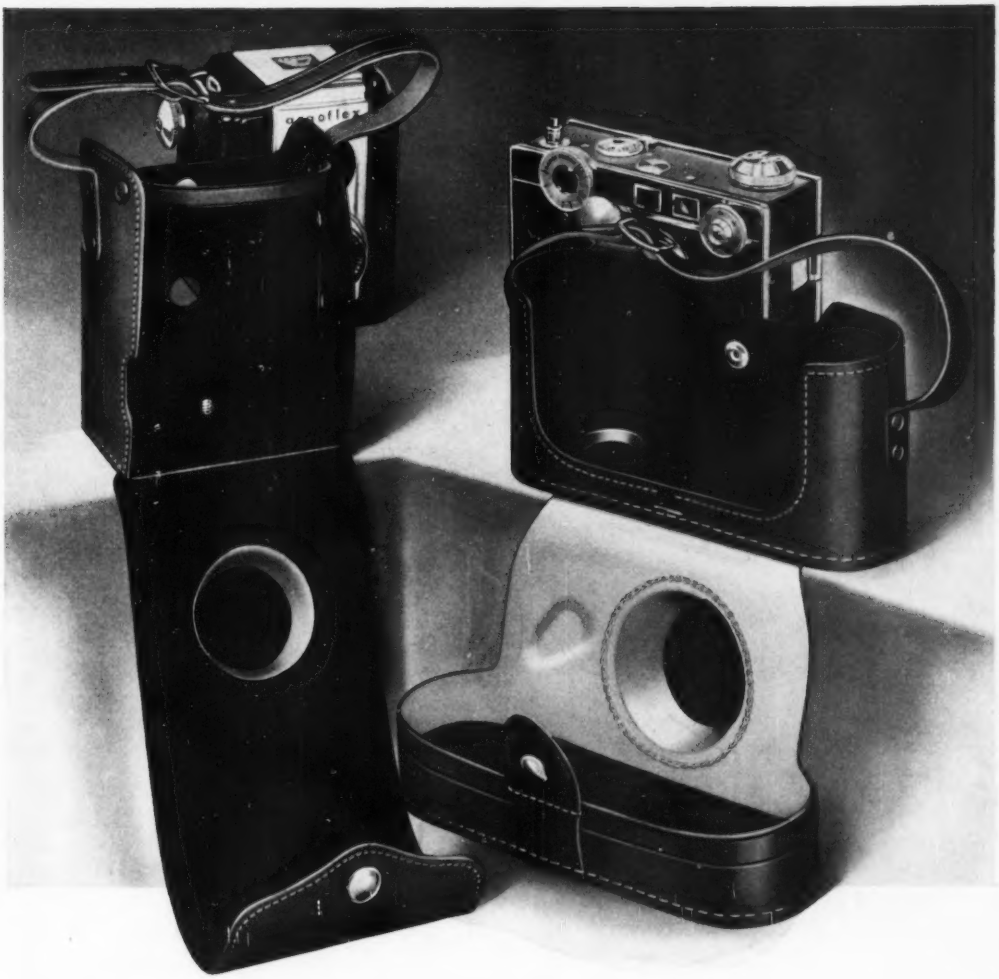

Protective...Conformable..."Pretty as a Picture"

Nashua's Rayon Velour—

for **argus** Camera Cases

Easy on the Eye with its rich appearance and depth of pile and *Easy to Work* because its creped backing is flexible and readily conformable . . . that's Nashua crepe rayon velour. The velour also fulfills an important protective function for Argus Cameras, Inc. by cushioning the cameras.

Nashua velours are luxury liners for jewelry and silverware cases, backing for picture frames, coverings for gift containers and other display boxes. You can fit this decorative and protective material (which flexes without wrinkling) into *your* packaging picture. You can choose the Nashua velour best suited for your requirement from a wide range of attractive colors.

NASHUA
MAKES PAPER MAKE MONEY FOR YOU

NASHUA GUMMED AND COATED PAPER COMPANY

NASHUA, NEW HAMPSHIRE

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West Carrollton GENUINE VEGETABLE Parchment

Has High Wet Strength, too!

Not only is West Carrollton Genuine Vegetable Parchment STRONG (wet or dry) but it is TASTELESS, ODORLESS and GREASE RESISTANT as well. It is ideal for wrapping all moist foods and insures that *all* the rich, tempting, sales-winning goodness of your products reaches the ultimate consumer. Complete facilities in our plant for printing in one or more attractive colors with special inks.

WEST CARROLLTON PARCHMENT COMPANY
WEST CARROLLTON, OHIO

DRY WAXED PARCHMENT
•
BUTTER WRAPPERS
•
BUTTER TUB LINERS & CIRCLES
•
BUTTER BOX LINERS
•
LARD CARTON LINERS
•
MILK & ICE CREAM CAN TOPS
•
SLICED BACON WRAPPERS
•
OLEOMARGARINE WRAPPERS
•
VEGETABLE SHORTENING CARTON LINERS
•
CELERY WRAPPERS
•
FISH FILLET WRAPPERS & INSERTS
•
MEAT WRAPPERS
•
LINERS FOR MEAT TINS
•
POULTRY WRAPPERS
•
CHEESE WRAPPERS
•
TAMALE WRAPPERS
•
MANY OTHERS

Swift's Adhesives help you...

and please Dad, too!

Whether he knows it or not, when Dad takes time out to enjoy a snack, almost all his foods and beverages are packaged neatly and cleanly with the aid of different adhesives.

Among them probably are Swift's Adhesives — special ones for canners, food packagers and bottlers. Our years of adhesive experience, our wide range of raw materials can help you find the adhesives that fit your requirements . . . and lower your operating cost.

Two of Swift's many special adhesives for packaging operations.

#1262 — Liquid adhesive for top and bottom sealing and titewrap work. A fast-setting, non-warp type adhesive that is clean machining.

Textite Flexible Glue — For quality setup box work. In convenient cake form — it is a non-warp type, light colored for finest work. Economical because of its better coverage.

SWIFT
ADHESIVES

Swift & Company
Adhesive Products Department
Chicago 9, Illinois

This offer expires November 30, 1951

Please send your 100 lb. introductory trial shipment of

☐ Swift's #1262 Adhesive
☐ Swift's Textite Flexible Glue

} At the quantity price

These will be tested for use in our operations. We understand, if not fully satisfactory, they may be returned for credit at your expense.

Name _____ Title _____
Firm Name _____
Address _____
City & State _____

MP-90

a wonderful cologne by *Dana*

kept wonderful by *Dodge*

● A Dodge Milbossed-top Cork Closure "guards the integrity" of this Solid Cologne by Dana in the convenient refill vial... permits not a whiff of precious fragrance to escape.

FASTIDIOUS WOMEN the world over look to Dana Perfumes for superlative fragrances. And, to keep these fragrances wonderful from maker to wearer, Dana looks to Dodge for a superlative closure. For their Solid Cologne refill vial, Dana specifications were:

1. *A closure that provides a positive, air-tight seal.*
2. *A closure in keeping with the smart simplicity of Dana's entire package.*

A Dodge Milbossed-top cork perfectly fulfilled both these important requirements. In addition, Dodge corks offer the utmost in convenience — are easily removed and replaced — *reseal* positively.

Your product, too, will profit from the advantages of Dodge wood top corks. Whatever size or color you desire, whether standard design or embossed with your name or trademark, Dodge has the closure for *you* . . . in natural high-grade cork permanently joined to a cleanly knurled hardwood top. Write or send a sample of your package for complete information.

Dodge

CORK CLOSURES

DESIGNED TO GUARD THE INTEGRITY OF THE CONTENTS

DODGE CORK COMPANY, INC., LANCASTER, PA.

Kard-O-Pak

Gives

VACUUM PACK PROTECTION

* **LOCKS FLAVOR IN!**

* **KEEPS MOISTURE OUT!**

Completely heat-sealed
PLASTIC INTERLINER
(Pliofilm, Polyethylene, etc.)
is protection against
AIR-MOISTURE-ODORS

STANDS UP
For Automatic Packing.

Only KARD-O-PAK containers, with their patented, SELF-OPENING FLAT BOTTOM, stand firm and upright for use with AUTOMATIC FILLING EQUIPMENT.

Now being used on Gump, Benco, Fry and Consolidated automatic filling and closing machines.

KARD-O-PAK **Containers are now being featured by leading Food and Specialty products including..**

COFFEE
DRIED EGGS
MILK POWDER
PLANT FOODS
SOAP POWDERS

Kard-O-Pak

A *Flexible* CONTAINER THAT GIVES *Vacuum Pack* PROTECTION

Write for Samples and Full Information

AMERICAN BAG AND PAPER CORP., Water and South Sts. • Phila. 47, Pa.

No matter what your ADHESIVE problem might be, Stein Hall will help you solve it.

With over 85 years of experience, trained technicians and the finest equipment make Stein Hall laboratories outstanding. Our nation wide sales force is available to service you and tell you about Stein Hall adhesives. Always remember, Stein Hall is on call.

HALLMARK ® QUALITY PRODUCTS

STEIN SH HALL

285 MADISON AVENUE NEW YORK 17, N. Y.

ESTABLISHED 1866

Branch offices in 16 cities in U.S. and Canada.

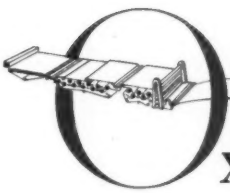
"But mother wants that one!"

Nobody, these days, thinks it very remarkable that a youngster can march into a store and choose exactly the brand his mother wants. He selects quickly and surely because intense competition has made the business of presenting America's food products to the consumer a highly developed science.

The urge to buy is stimulated in many ways — through colorful package wraps, recipe folders, direct mail promotions, posters and displays as well as women's service and other national magazines.

All day, every day Oxford Papers serve this great industry through all of these forms of printed selling. They are standard dress for many of the country's best known products. They are the accepted choice for the full range of advertising and merchandising aids which create demand for new products and help build sales for established favorites.

You'll find Oxford Papers for fine reproduction by letterpress, offset, lithography or rotogravure a sound choice for your printed selling.



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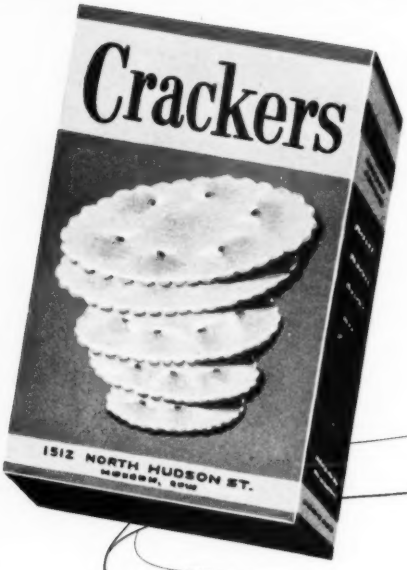
Mills at Rumford, Maine, and West Carrollton, Ohio



OXFORD PAPERS

Help Build Sales

From coast to coast you meet Oxford Papers at work helping good printing make identification more certain, more profitable for makers of food products, beverages, confections, cosmetics and dozens of other commodities. In addition to grades especially developed for labels and package-wraps, other Oxford Papers are equally favored for magazines, folders, brochures, booklets and catalogues. See for yourself how much Oxford Papers can do to make good printing more profitable for you.

IT PAYS TO ASK FOR — AND USE THESE FINE OXFORD AND OXFORD MIAMI PAPERS

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Polar Superfine Enamel
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Maineflex Enamel, Coated One Side
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Coated Publication Text

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English Finish Litho
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Bethlehem, Pa.	Wilcox-Walter-Furlong Paper Co.
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Charlotte, N. C.	Caskie Paper Co., Inc. The Charlotte Paper Co.
Chattanooga, Tenn.	Bond-Sanders Paper Co.
Chicago, Ill.	Bermingham & Prosser Co. Bradner, Smith & Co. The Whitaker Paper Co.
Cincinnati, Ohio	The Johnston Paper Co. The Whitaker Paper Co.
Cleveland, Ohio	The Cleveland Paper Co.
Columbus, Ohio	Scioto Paper Co.
Dayton, Ohio	Cincinnati Cordage Co. The Whitaker Paper Co.
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Detroit, Mich.	Chope Stevens Paper Co.
Fresno, Calif.	Blake, Moffitt & Towne
Hartford, Conn.	Green & Low Paper Co., Inc.
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Jacksonville, Fla.	Jacksonville Paper Co.
Kalamazoo, Mich.	Bermingham & Prosser Co.
Kansas City, Mo.	Bermingham & Prosser Co.
Knoxville, Tenn.	Louisville Paper Co.
Lincoln, Neb.	Western Newspaper Union
Little Rock, Ark.	Roach Paper Co.
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Los Angeles, Calif.	Blake, Moffitt & Towne
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Minneapolis, Minn.	Wilcox-Mosher-Leffholm Co.
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Omaha, Neb.	Western Paper Co.
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San Jose, Calif.	Blake, Moffitt & Towne
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OXFORD PAPER COMPANY, *230 Park Avenue, New York 17, N. Y.*

OXFORD MIAMI PAPER COMPANY, *35 East Wacker Drive, Chicago 1, Ill.*

MILLS AT RUMFORD, MAINE AND WEST CARROLLTON, OHIO

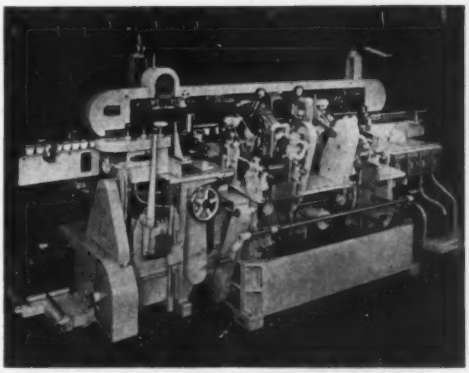
LABELING!

BETTER – because it's done in one motion!

A NEW HIGH in precision labeling is now achieved on Pneumatic Direc-Transfer machines.

No picker plates or gripper fingers are used in transferring the individual labels from stack to container. They are fed and controlled entirely by air suction pads. Each label receives a uniformly thin coating of adhesive, and is given ample time for moisture to penetrate and "temper" the paper stock. Result is exact registration and complete adhesion of label.

Direc-Transfer labeling therefore, *means better bottling* for producers of drugs, liquor, foods, and cosmetics to mention only a few general classifications. Write for Bulletin 116 which illustrates three available models.



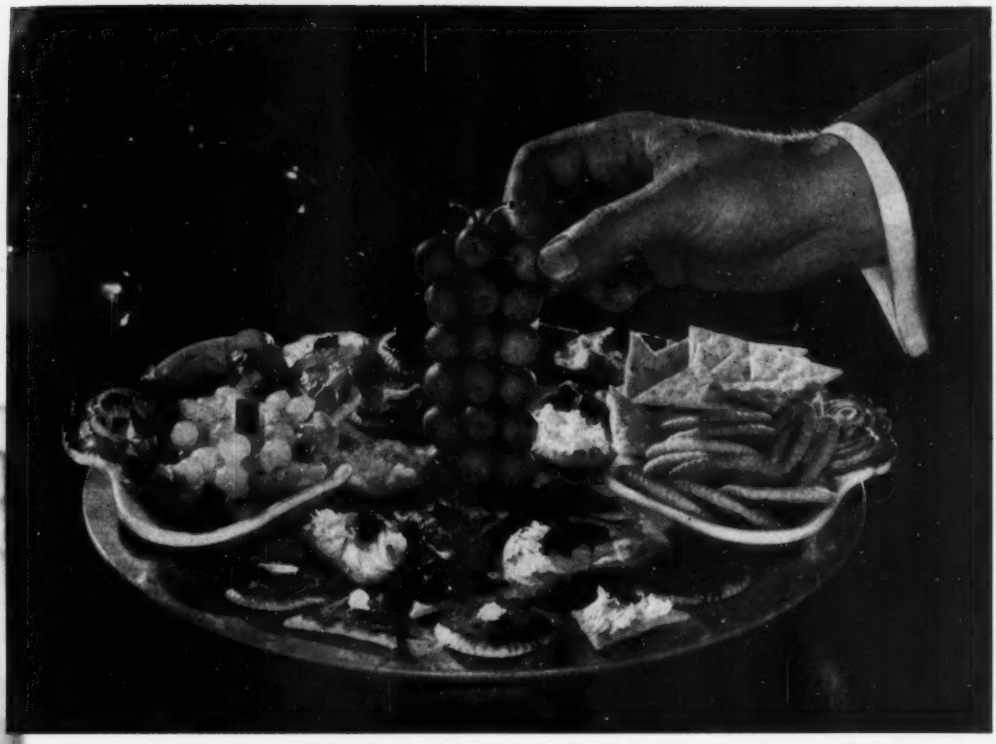
Pneumatic's 4-Inch Duplex Direc-Transfer Labeling Machine

★ ★ ★

PNEUMATIC SCALE CORP., LTD., 82 Newport Avenue, Quincy 71, Massachusetts. *Also: New York; Chicago; San Francisco; Los Angeles; Seattle; Leeds, England.*

PNEUMATIC

PACKAGING AND BOTTLING MACHINERY



Ever pick olives right off a "tree"?

Here's a brand new idea that's bound to appeal to hostesses. Re Umberto Selected Spanish Olives "growing" on a tree right in the jar. Just lift it out . . . put it on a dish or tray and let the folks "pick" 'em. It's a conversation piece all right . . . and watch them go for these delicious olives!

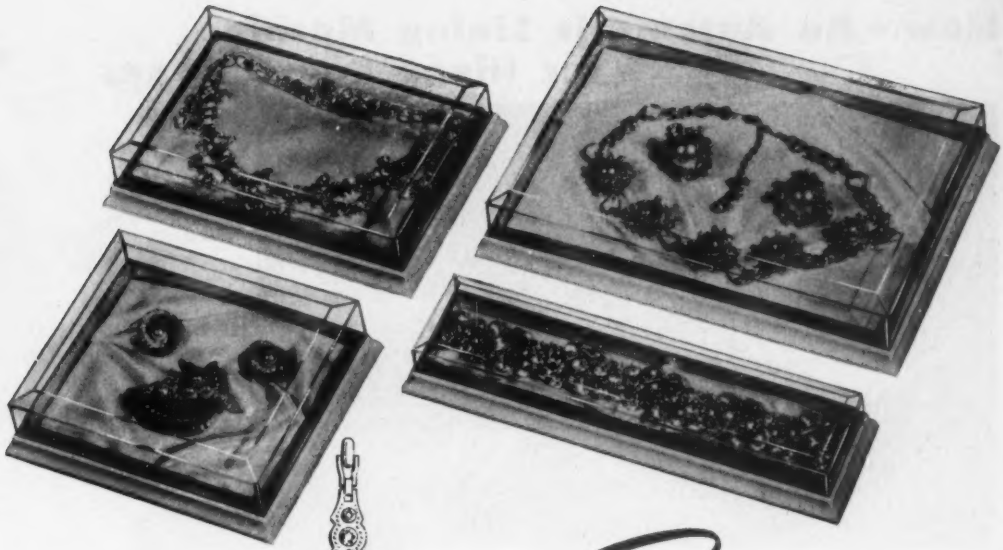
Crown Screw Caps pleasingly decorated in two colors are used as closures for this package. These caps have the famous Deep Hook Thread which grips under the glass thread of the bottle, exerts a greater sealing pressure without wedging or binding. In addition, the liners in the Crown Screw Caps have been developed specifically for this type of product.

For closures and liners that are scientifically correct for your particular products, come to Crown. Our years of sealing experience, and analytical and research laboratories are at your disposal. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's Largest Makers of Metal Closures.*

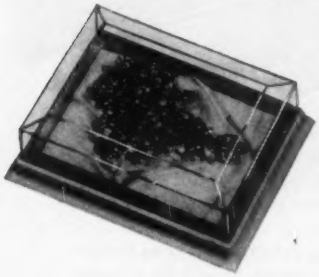
CROWN CLOSURES

Approved by millions of housewives

** Re Umberto Selected Spanish Olives are imported and packed by Strohmeyer & Arpe, New York.*



YOUR BEST LOOKS *Better* when packaged in Koppers Polystyrene



A complete series of jewelry display boxes—five different sizes—is molded from Koppers Polystyrene 31. Manufacturer: C. & M Manufacturing Co., Providence, R. I. Molder: C & M Plastic Co., Providence.

● Merchandisers say that a well-displayed item is half sold. No wonder retailers are so enthusiastic about display boxes like this series for jewelry made by C & M Manufacturing Company, Providence, R. I.

Covers of the boxes are molded from crystal-clear Koppers Polystyrene 31, combining maximum visibility with necessary protection for the product. The tray is ivory Koppers Polystyrene 31, which forms a background that dramatizes almost any piece of jewelry.

For all its attractiveness, Koppers Polystyrene is a low-cost packaging material. Its original cost is low and its light weight yields more pieces per pound than similar materials.

No matter what type of packages you design and manufacture, it will pay you to investigate fully the economy and moldability of Koppers Polystyrene.

Koppers Polystyrene has made Many Products Better and Many Better Products Possible.

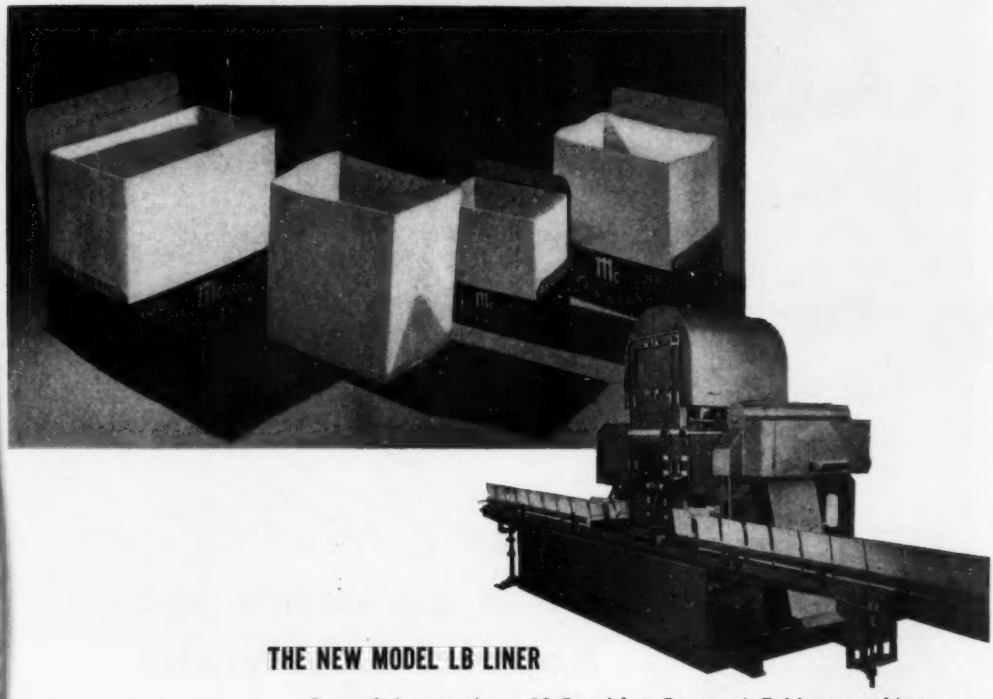
KOPPERS

Koppers Plastics

KOPPERS COMPANY, INC., Chemical Division, PITTSBURGH 19, PA.

SALES OFFICES: NEW YORK · BOSTON · PHILADELPHIA · CHICAGO · DETROIT · LOS ANGELES

Now – An Automatic Lining Machine for Hinge-Cover Boxes



THE NEW MODEL LB LINER

Currently in operation at McCormick & Company's Baltimore packing plant on their tea bag carton production line is the new U. S. Automatic MODEL LB Lining Machine. This newest development for the packaging field automatically forms, glues and inserts liners in pre-formed cartons of a wide range of sizes.

The new LB Liner is unique in the packaging field because of its ability to handle so many different sizes of hinge-cover cartons. Thus it can be used for many product packages among which are boxes for cookies, crackers, macaroni and spaghetti.

The MODEL LB is designed for use with the standard Brightwood box and carton forming machine. It will also line boxes produced by other similar machines. As the formed cartons are discharged from the Brightwood they are picked up automatically by the LB lined and forwarded to the next station on the packaging line.

As can been seen from the illustrations above the new LB Liner is convertible. It can line varying sized and shaped cartons with easy change-over; thus being suitable for both long and short run operations.

Write ***US*** today for full details on the new MODEL LB Liner – another example of forward developments by ***US.***

U. S. AUTOMATIC BOX MACHINERY CO., INC.

Owning and Operating NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

Nut and Grove Weighing Package Forming and Filling Carton Sealing, Lining, Wrapping, Box Sealing

122 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: New York ★ Cleveland ★ Chicago

in a
MILPRINT PACKAGE
your product
tells its own sales story

The packages shown here a
typical of more than fifty ro
gravure packages produc
for United Biscuit Compa
divisions by Milprint a
more are in productio

THAT'S WH

United Biscuit Company Division
use full color cellophane overwraps by Milpri

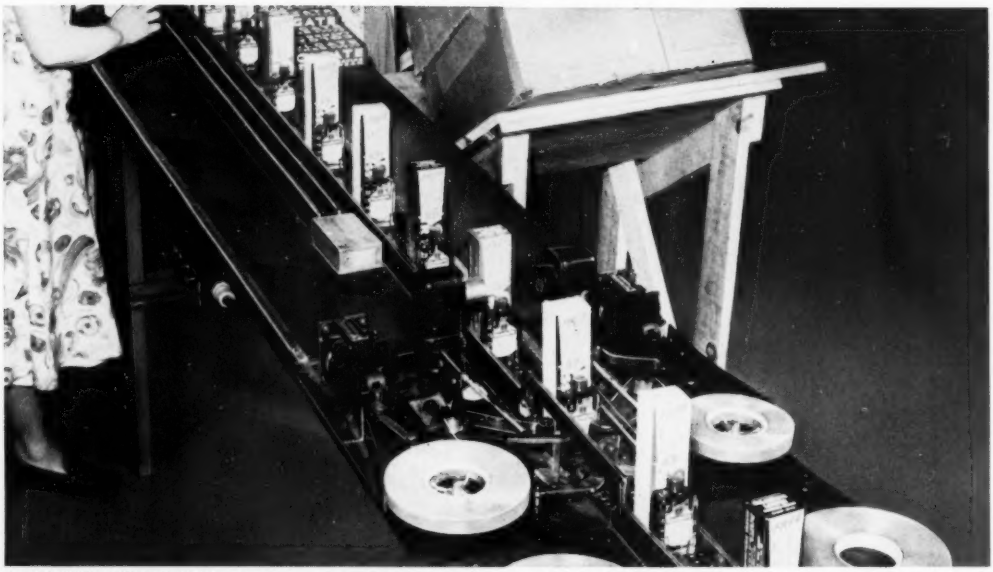
Let the packages TELL YOU why United Biscuit Company, *and countless* other successful manufacturers, count on Milprint for packaging THAT SELLS! These Milprint Cellophane overwraps—with product printed in lifelike, full color rotogravure—reproduce everything but the flavor inside . . . protect that flavor, too, keeping *air out, crispness in!* For vivid, self-selling package design . . . for broadest range of merchandising experience . . . for widest selection of packaging materials and printing processes . . . CALL YOUR MILPRINT MAN TODAY!

This insert printed by Milprint

Milprint INC.

General Offices: Milwaukee, Wis. • Sales Offices in Principal Cities

Printed Cellophane, Pliofilm, Polyethylene, Acetate, Glassine, Foils, Folding Cartons, Lithographed Displays, Printed Promotional Material

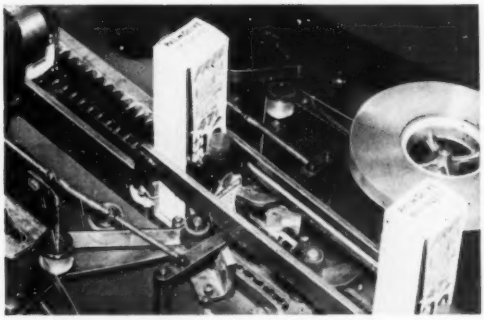


2,500 COMPLETED DEALS an hour pour out of this automatic unit, which occupies 40% less space than the equipment formerly required for packaging combination deals at the Colgate-Palmolive-Peet plant.

THIS SET-UP SAVED $4,500

For Colgate-Palmolive-Peet

"SCOTCH" Cellophane Tape plus a team of automatic package bundlers . . . that's the wonder set-up Colgate-Palmolive-Peet used to bundle this combination deal of after-shave lotion and shaving cream. And what a performance they turned in! *Production up 37% . . . $4,500 was saved on this promotion over previous packaging methods!*



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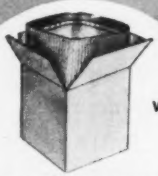
Waterproof Liners Jan-P-125



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CLEARSITE definitely enhances product value; it looks expensive but really isn't.

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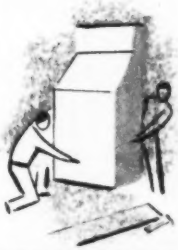
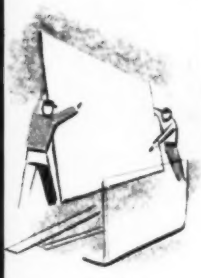


CONSTRUCTION

LAMINATION



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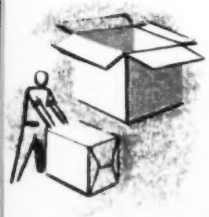

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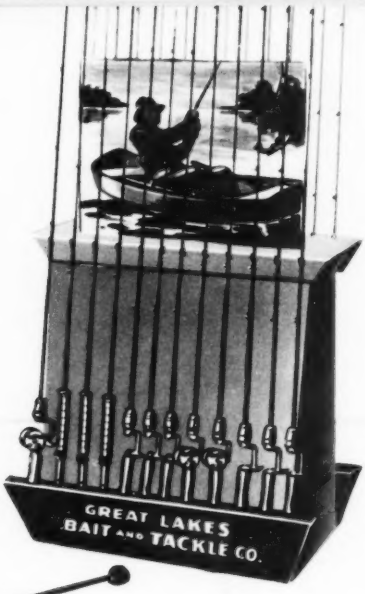

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Military Packaging Engineers...

GET THIS *NEW* POCKET SIZE

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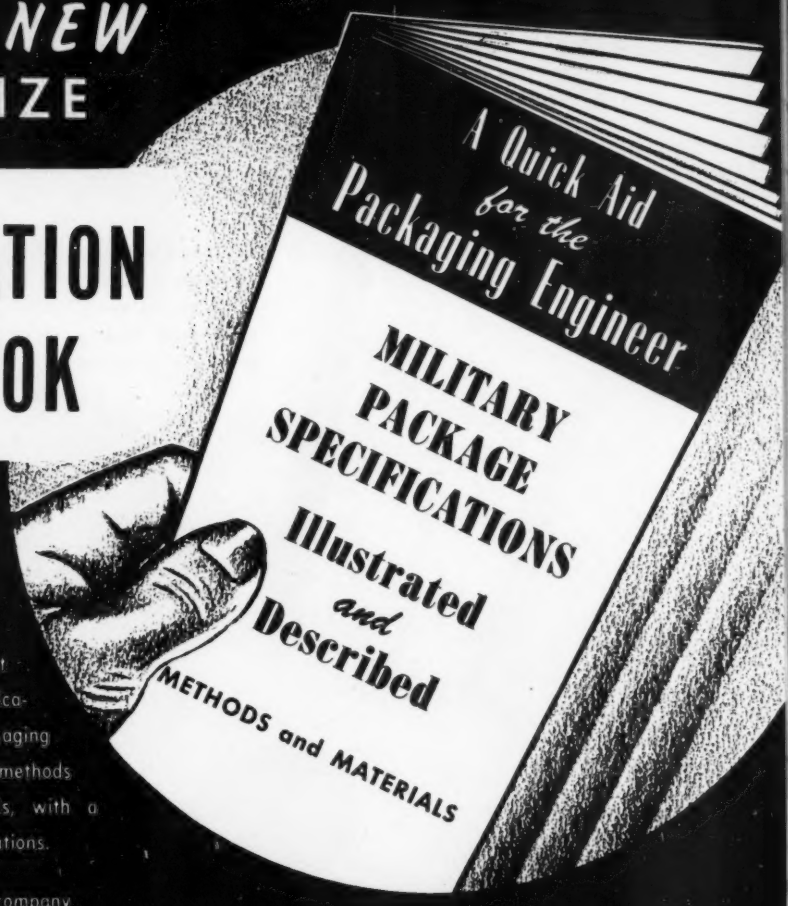
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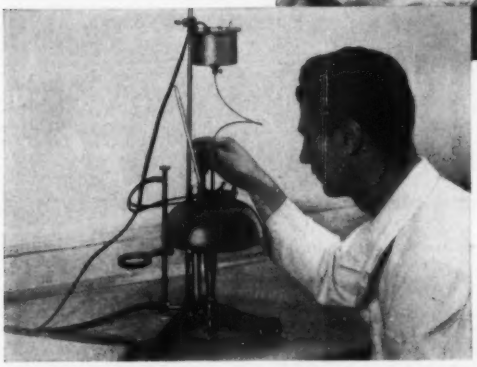
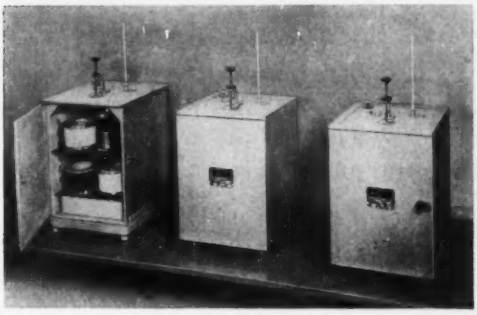
Inks get both "deep-freeze" and "wet wall refrigeration" tests at BBD to forecast their flexibility (flake-off resistance) on the printed package under refrigerator or freezer temperatures.



This BBD chemist is shown testing the flash-point of aniline inks. A specific flash-point is essential to safeguard against fires or explosions in the pressroom and in transit.



Battery of precision temperature-controlled test ovens in BBD laboratory determine in advance the block point of new ink formulations... indicate their non-offsetting qualities at temperatures met in practice during rewinding and storage of printed rolls as well as storage of the printed package.

If you would like to know how BBD INKS can do a better job...to meet your most rigid packaging specifications...write today to **Bensing Bros. & Deeney, 3301 Hunting Park Ave., Philadelphia 29, Pa.**

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—*and the cold*—

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Here at "Aniline Ink Headquarters" ink formulations are put through a series of standard tests before they are O.K.'d for production. This product pre-testing is your assurance of inks "tailor-made" to stand up on the printed package under all conditions it encounters in the trade... and to perform properly on the press. No wonder BBD ANILINE INKS are first choice of aniline printers everywhere!

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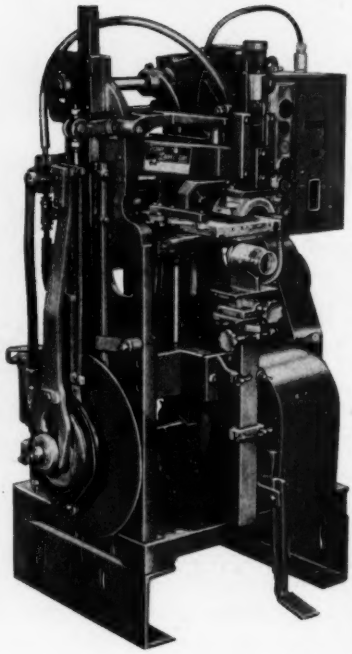
More Production

by LABELING WITHOUT GLUE

on the

PONY *Label-DRI**

One of the bottles the B.C. Remedy Co. labels on the Pony *Label-DRI*



MODEL 86TO (PONY *Label-DRI*)

nothing to stop—
UNINTERRUPTED PRODUCTION

- ★ No lost time for morning glue preparation
- ★ No early shut-down for evening clean-up
- ★ No lunch-time glue maintenance
- ★ No downtime for adding glue, thinning with water; no continual fighting for balanced glue consistency.
- ★ No water to cause corners to "spring back"
- ★ Quicker starting after change-overs.

No blisters or wrinkles to impair perfect appearance
(Because no water can unevenly expand paper fibres)

Always Perfect Registry because of vacuum method of label handling.

*Reg. U. S. Pat. Off. 605

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PEPPERELL FABRICS
LADY PEPPERELL
superfine muslin
2 SHEETS 72 x 99
SIZE BEFORE HEMMING
EXCEEDS TYPE 140 STANDARDS
144 threads per square inch... 100,000 more inches of thread - 33⅓% stronger than "regular" muslin
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For Eye-Catching Packaging...

PEPPERELL

Goes to Its Buyers

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VOLUME 25
NUMBER 2
OCTOBER 1951

Modern packaging

CHARTING weight variations of paperboard in materials-control laboratory at Scott Paper Co., which has one of the most complete statistical quality-control programs in the entire packaging field.

Formula for quality

PACKAGERS AND SUPPLIERS BOTH FIND STATISTICAL CONTROL METHODS PAY

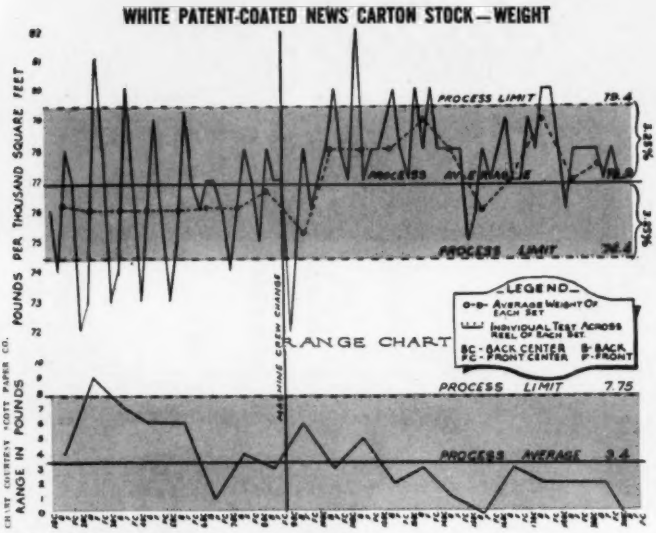
The ultimate goal of every company doing packaging is to produce finished packages of a quality acceptable to the consumer in sufficient quantities and at costs permitting a reasonable profit.

In today's mechanized production, such quality cannot be merely inspected into a package. It must be built into its fabrication, step by step. One of the most effective tools for doing this is the application of *statistical* quality control.

Statistical methods of control differ from previous concepts in that they are based on the acceptance of now well-established mathematical principles for judging the quality of large quantities of mass-produced, homogeneous lots by examining a relatively small number of samples for their conformance to a specified standard.

Much credit for the application of these statistical theories of probability to industrial processes goes to Dr. Walter A. Shewhart and his associates at Western Electric and the Bell Laboratories, who in 1924 began delving into the realm of mathematics as a means to reduce defectives and to lessen the cost of inspection. This group not only put into effect systems of statistical quality control for their own operations, but promoted them to improve the quality of goods from their suppliers.

It was World War II, however, which assured the spread of this method of judging quality to a wide variety of industries. The country needed precision-built weapons in enormous quantities almost overnight. Victory was dependent upon speed and efficiency. There was no time to inspect individually every gun part, yet when completed and in the hands of a soldier in the field every gun had to function to the limit of its capability. Statistical quality control offered the only possible method of assuring within the smallest margin for error



PRINCIPLE of statistical quality control is illustrated by the above chart showing variations in paperboard weight. The Process Average represents the control standard. Deviations charted within the Process Limits are *in control*. Deviations beyond these plus and minus tolerances are judged to be *out of control*. The range chart based on the same principle shows variations in weight across the reel of the paperboard. Too many deviations beyond Process Limits demand investigation.

accurate performance of the tremendous quantities of quickly produced materiel. It is probably not yet fully appreciated how all-important was the complete acceptance by the armed forces of statistical quality control in winning the war.

Successful military use of statistical principles spurred a rapid spread to other industries. The American Society for Quality Control, with scarcely a handful of members at the beginning of World War II, had some 2,000 registrations at one of its recent annual conferences.

Enthusiastic users of statistical quality control swear it is one of the most valuable industrial tools of all time: (1) to assure constantly superior manufactured products, (2) to eliminate waste, (3) to effect savings which can eventually be passed on to the consumer and (4) ultimately to improve labor relations through more satisfied employees.

Furthermore, in times of scarcity it is practically an essential to evaluate widely deviating lots of sometimes inferior materials and supply needed recommendations for their handling.

CORRELATING finished package performance data with specified requirements of packaging materials is one of the most valuable phases of the statistical quality-control program. Here laboratory technicians are checking finished packages in storage tests at National Biscuit Co.

An effective quality-control program must be woven into the very warp and woof of the manufacturing program. It begins with statistical methods of market research to determine the kind of product and package that is required. It includes the establishment of standard specifications to meet those requirements. It follows through with statistical-control methods to check every step of the manufacturing process to see that the finished product measures up to established standards within the statistically established tolerance limits.

Technical reports on statistical control of packaging have previously been published in MODERN PACKAGING,* but it is the purpose of this article to explain in lay language the advantages of such programs to packaging divisions as a means of improving their specific operations in relation to the over-all building of final product quality.

To begin, it may be well to explain that quality in this sense does not mean that one type of drug package or breakfast-food package may be superior to its competitors, or represents perfection, but rather that it represents a company's established standard as the most efficient and economical package that can be made for the product in question to meet the final favorable approval of the ultimate consumer. It should also be pointed out here that it can be as uneconomic to over-package as it is to *guess* the minimum requirements on which you can get by.

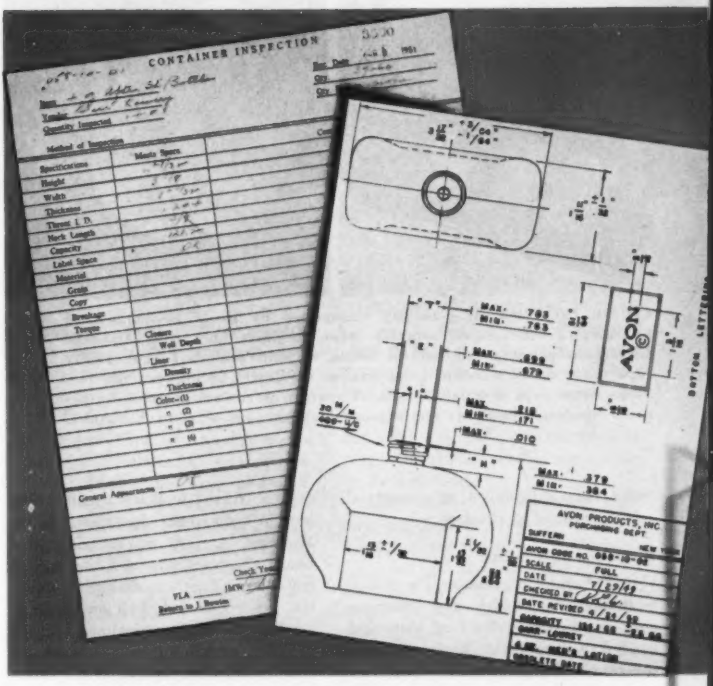
The need for statistical methods of quality control have become increasingly apparent in the packaging process during recent years for several reasons: (1) Today's national distribution demands protection for considerably longer shelf life under a tremendously wide range of conditions. (2) High-speed machine production permits much less deviation from established standards to maintain a high degree of production efficiency. (3) The increasing variety of packages demands constant study of masses of data correlated between performance of finished packages, the properties of the materials from which they are made and the capabilities of the equipment on which they are produced.

In industries with packages coming

* See "Filling-Weight Control with X and R Charts," MODERN PACKAGING, Oct., 1946, p. 118, and "Principles of Statistical Control," Nov., 1948, p. 144.

off the lines at a rate of hundreds per minute, 100% inspection is becoming impossible. It has also been discovered that, even where possible, 100% inspection is often unreliable due to the risk of error through fatigue, flinching, etc. Furthermore, 100% inspection can usually be set up only to weed out defective finished items. Rarely can it be used for evaluating the elements of the entire package-production process—the uniformity of tons of boxboard that are made into cartons, the thousands of rolls of waxed paper used in a single shift, the adhesion capabilities of varying lots of label glues.

Much less can 100% inspection be used to correlate in advance the characteristics of varying lots of packaging materials with machine or manpower performance. Deviations may be observed later by visual inspection of the finished package—but it is then too late to prevent what has already happened.



SPECIFICATION for lotion bottle used by Avon Products Corp., with typical container inspection work sheet, shows how characteristics of incoming lots are recorded by sampling method to indicate conformance to standard. The work-sheet data may be charted for varying characteristics of different lots, or to point up characteristics out of control.

Basic principle

The application of statistical quality control is based on the theory that some variation is normal in any process. The first job is to determine by the massing of considerable data, through continued trial and retrial, how much normal variation from the desired standard can be expected under the best operating conditions. Once these data are obtained, a chart may be set up with a center line representing the average and with two tolerance limit lines above and below the average line, indicating the control limits. A series of inspected samples, taken under representative operating conditions and selected by established mathematical rules of sampling, are then recorded on the chart according to their performances.

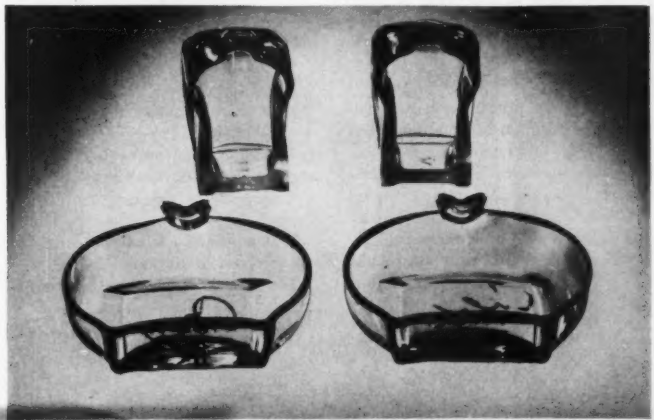
If all of the samples taken within a given lot, a given shift, over a specified length of time (assuming, of course, that the size of the sample is adequate) fall within the control limits, then in accordance with statistical control practice it may be assumed that the packaging material, filling or sealing operation under study is giving performance up to specification.

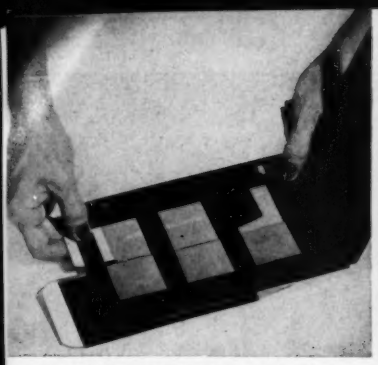
If too many samples inspected within a given interval or from a selected number of lots are charted beyond the control limits, there are variations that demand attention. There are statistical rules, too, for determining how many are "too many."

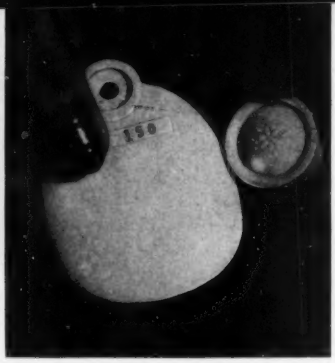
Too many samples *below* the control limits usually indicate trouble. Too many giving *better* performance than specified limits, usually indicate that some phase of the process needs more study with the purpose either of effecting savings by relaxing the specification or of using such data to obtain improved quality or faster production. Many firms today have been able to avoid excessive price increases by such statistical control of the packaging process.

A few examples will help to illus-

BY SAWING bottles in half, both vertically and horizontally, and observing selected samples from various lots, the control department can often determine certain out-of-control conditions. This is an example of the various kinds of test procedures that must be established.







COLOR CONTROL is generally maintained by visual comparison of lot samples with control samples. Avon Products Co.'s color standard for carton printing has control limits of light and dark, but plastic caps must match standard color plaque as closely as eye can observe. Some firms even maintain statistical control of control samples by periodic spectrophotometric readings and replacement of control samples.

trate the advantages of statistical quality control in practice.

Statistics in practice

Scott Paper Co., Chester, Pa., which maintains one of the most complete and continuous systems of statistical control, was recently able to increase the speed of a chopper 63% by correlating data concerning the characteristics of paperboard used for the tube cores of rolls of toilet tissue with the performance of glues, knives and other component parts of the machine. Through statistical control this company is also working on a project with the aim of increasing the running speed of some packaging equipment more than 100%.

A most wasteful practice in many packaging operations is overfill. The minimum must be absolute, because underfilling below content stated on the label is illegal. But to avoid this pitfall, the tendency too often is deliberately to overfill. By statistical sampling and charting of data, leading to adjustment of filling machines, some firms have reported reductions in average overfill from as much as 15% down to a fraction of 1%. Such tremendous savings, pointed up in dollars, need no justification to management.

Statistical-control methods and the massing of data they produce are invaluable in locating urgent problems which would otherwise not be so readily apparent. Another example from Scott Paper Co. concerns a production run of white patent-coated news carton stock from one of its folding carton suppliers. Ordinarily caliper is used in many specifications and in most price quotations as the accepted means of assuring that board characteristics such as weight, stiffness and other strength properties are correlated with and interrelated to the factor of caliper.

When certain difficulties were encountered in the running of the board indicating a deviation from standard quality, Scott's Materials Control Department began searching for the reason.

Since the caliper of the run, determined by statistical methods, appeared to be exceptionally well controlled, other factors had to be investigated. Other sampling and charting were done on the basis of weight per thousand square feet. This data showed considerable variation beyond the control limits. With this additional information, the Materials Control Department was able to determine variations in density characteristics which proved to be the cause of the deficiencies and could thereby quickly make recommendations for correction. Such information also proves of value in improving package quality through more clearly defined specifications for suppliers.

Quality-control set-up

Almost every firm today has a quality-control program of some kind, but many such programs are not integrated throughout the entire manufacturing process and a great many, unfortunately, are still based on outmoded concepts. The successful statistical quality-control program should have the full endorsement of top management and, ideally, should be an independent department responsible directly to management. It should be qualified to determine what is required, quality-wise, from a consumer standpoint and have the power to reject any product or package which does not meet that requirement. Naturally it must be cooperative and sympathetic to the problems of all departments, but its recommendations should in general only be over-ridden by management decision.

The quality-control director should be a technician who knows how to set up the mathematical procedure for building quality by statistical methods into every phase of the production. Under him are quality-control specialists as required, reporting their findings to him for the purpose of correlating and interrelating the data that are obtained. Inspectors, under such a set-up, also report to quality control.

Statistical quality control of *packaging*, because of its increasingly specialized technical problems, which differ greatly from product technology, should be set up as a specialized branch of the over-all quality program. Some of its chief functions are the following (which could be put into effect, incidentally, to greater advantage within the packaging department, even without a company-wide statistical-control program):

1. Statistical approach to the establishment of package specifications.
2. Statistical approach to systems of sampling and keeping records.
3. Development of testing techniques for evaluating required package quality.
4. Sampling routine and the procedure for keeping work sheets and charted records for:
   a. Examination of all incoming packaging materials,
   b. Operation of all packaging equipment,
   c. Performance of finished packages,
   d. Inspection of finished packages,
   e. Field tests of finished packages.
5. Training of packaging quality-control personnel—laboratory workers and inspectors reporting to quality control.
6. Analysis of all data obtained for the purpose of recommendation.

The actual job of setting up statis-

tical-control procedure is a technical problem, the mechanics of which must be worked out to meet the requirements of each specific packaging operation in accordance with the best established practice. Accepted statistical tables are used and considerable published information is available on methods of sampling and the charting of results. (See References at end of article.) Some universities offer short courses in statistical quality control and much valuable information may be obtained through the American Society for Quality Control.†

Only when the program covers all phases of the packaging process and can mass a sufficient quantity of reliable data for comparison can statistical control be used to its fullest advantage. Many packaging men say statistical quality control of packaging is still in its infancy. In many instances only a beginning has been made toward collecting enough data to correlate finished package performance with the writing of specifications.

Said one user of flexible films, "We specify for a certain package a WVT transmission rate of 2 grams and we evaluate all incoming materials to see that they meet that requirement, but we won't know until we have massed a great deal more data whether we need it that good in relation to the performance of the seal on our package. However, until we can make further storage tests approximating all climatic and seasonal variations we would not relax our specifications." Almost all packaging men say they should be doing more testing and evaluating than they do.

A representative of a drug firm which adopted a statistical quality-control program two years ago said that his department wouldn't experience the full benefits of it for some time to come. It has meant the rewriting of many specifications, some of them 15 years old, he said, based on new performance-control records which they are only now, with the system in effect, able to collect.

Because of the nature of their business, ethical drug firms say they will never dispense with 100% inspection of packaged medical products for identity and control numbers, but they believe statistical quality control is invaluable in providing a more accurate mathematical check on the human element of failure to detect defectives. With statistical methods of control operating in every phase of the production and packaging process, there are multiple checks on the finished packages and even statistical checks on the 100% inspection.

It is believed that the greater accuracy such checks can provide makes for more satisfied employees. It gives the worker a clear-cut standard and a better knowledge of what is expected of him. The theory that some variation is normal does not put the entire responsibility at the end of the line. It recognizes the margin for error within the laws of probability and thus develops pride in detecting the few defectives that may creep through, rather than fear of failure.

Statistical control also permits additional control of standards themselves. For example, most printing-ink colors are fugitive. Color-control standards within tolerance limits of light and dark may be provided for matching colors. Several firms have discovered, however, that unless the control standards are checked periodically there is no assurance that the standards used for matching are within limits. One firm which establishes its color standards by photospectrometric readings periodically examines its color standards and issues new ones if the control samples have faded beyond limits.

One of the greatest benefits of packaging quality control through statistical methods is its effect in reaching out to the suppliers themselves. Some of the large suppliers of paper, cartons, flexible films and containers now maintain the most complete statistical-control systems of their own and send with each lot a complete report of its characteristics as measured by their methods.

Such efficient control *could* eliminate the necessity for duplication of inspection by the user, although the most meticulous control directors say they will never accept incoming materials without their own control. A few suppliers, unfortunately—and this is true particularly in times of shortages, when it is a question of "take this or nothing"—are not so particular. These firms are the hardest trial of a quality-control department. In normal times their off-specification shipments can mean costly rejects and lost production time. In times of scarcity they sometimes have to be accepted, with the user suffering the consequent loss through reject packages or less efficient operation.

In general, however, users of packaging supplies who have adopted statistical quality control say it has performed a great service in making it (*This article continued on page* 184)

† Address: 70 E. 45 St., New York City.

WEIGHT CHECK is made routinely on Post Toasties line to assure accuracy of carton filling. Statistical control methods have been used by some firms to reduce the average overfill down as low as a fraction of 1%.

100% INSPECTION of packaged medical products for identity and control number will probably never be entirely eliminated, but today statistical checks are used to improve 100% inspection. PHOTO COURTESY SHARP & DOHME.

INDIVIDUAL DRINKS are capped by polyethylene plug (with enough flexibility for variations of hand-blown glass) and lead-foil seal. Luxury look for set of 10 is inexpensively achieved with corrugated box that serves also as a shipper.

Cognac by the drink

PROVIDING THE GLASS AS WELL AS THE DRINK, TO ENCOURAGE BUYING IN SETS, IS DENIS-MOUNIE'S STRIKING IDEA FOR MINIATURES

The bouquet of fine French cognac—savored best in traditional bulb-shaped brandy glasses—is now made easier for Americans to enjoy by a packaging idea that was conceived in the United States and executed in France.

The idea is as simple as it is effective—so simple that it no doubt has competitors muttering to themselves in wonderment that they didn't think of it first. It incorporates an unusual use of a snap-in polyethylene closure.

Almost two years ago, Carillon Importers, Ltd., New York, sole agents in the U. S. for J. Denis, Henry Mounie & Co. cognacs, suggested to their French client the idea of (1) using a small brandy snifter glass as a single-portion, 1-oz. package and (2) boxing a set of the glasses.

In explaining the merits of this packaging to his French confreres, Alexander Lesnor, president of Carillon, pointed out that American homes seldom have the correct glassware for serving brandies properly. From a sales standpoint it would be advantageous, therefore, to help the potential bottle purchaser acquire his brandy glasses. This was coupled with the knowledge that package sales also increased when potential customers—who enjoyed an after-dinner brandy when dining out—could first buy small quantities at a reasonable price to try at home. The individual-serving package would thus provide an inexpensive way of

attracting new customers and the glass itself, as the start of a set, would be an incentive that would bring repeat business.

Boxing a set of the filled glasses offered additional merchandising advantages, encouraging multiple-unit sales by appealing to shoppers who could afford to purchase a complete set at one time for their own use. It could also be promoted as a gift package, suitable for any number of occasions such as wedding anniversaries, house warmings, etc.

Impressed by the presentation, Denis-Mounie executives set to work designing the glass and package for its Gold Leaf brand cognac. The results are especially intriguing because of the packaging problems that were overcome.

The company decided to use hand-blown glasses as one means of showing the quality of the cognac. Such glasses, however, presented difficulties, since the dimensions of the mouth varied too widely to permit use of any conventional type of closure. The solution was found in the development of a shallow plug-type stopper molded of polyethylene, making use of that plastic's unusual flexibility and sealing qualities. The plug, when pressed down inside the mouth of the glass so that the narrow flange around its circumference seats securely on the lip of the glass, creates a positive, leakproof seal. The design of the closure has been patented in France and patents are pending in the United States and United Kingdom.

A disk of cellophane is laid over the polyethylene and this, in turn, is covered with a heavy cap-like seal of lead foil, embossed with the company's initials and decorated with a dull gold lacquer-type finish. Apparently one purpose of the secondary closure is to prevent the escape of aroma which might permeate through the polyethylene plug. The revenue stamp completes a tamperproof seal.

Each glass has a small, removable, die-cut, gold-colored, paper label which carries all the mandatory information about contents.

In designing a box that would protect these fragile glasses during transoceanic shipment and distribution over here and at the same time serve as an attractive presentation package, the company also had to consider costs. The result is a corrugated box with the look of a luxury package.

The box itself is constructed from two pieces of corrugated board. One piece folds to form the lid, back, bottom and part of the front walls. Around it is an outer shell that forms the other two sides and reinforces the back and front walls.

Two printed cover papers are on the box. The background paper is a sunny yellow, the shade of rich cream; the second—used to trim the box edges and for the interior fittings—is a bright crimson. A replica of the famous grape-leaf gold label used on the full-size Denis-Mounie bottle is the only decoration on the lid. A small paper pull-up tab stapled to the edge provides a means of lifting the hinged lid flap that is tucked inside the front edge.

A crimson-colored suede-finish paper lines the inside of the lid, strengthening the luxury impression. The company name, the coat of arms and founding date are hot stamped in gold on this lining.

The 10 glasses are protected from shock by inner cushioning and dividers, all made of corrugated. Each glass is cushioned in a strip of corrugated folded to form individual cells.

The fragility of the hand-blown glasses makes it necessary to do almost all of the packaging by hand, according to the company. Prior to filling, each glass is examined for imperfections in shape and to ascertain whether the size of the mouth will accommodate the polyethylene plug. Those that pass inspection are filled with 1 oz. of cognac, closed, sealed and labeled by hand. Finished packages are packed in wooden shipping cases.

The new package was introduced originally in England in June, 1950, where it is reported to have been a great success. The first shipments to this country started in July, 1951. Distribution is currently on an allocation basis, with limited supplies going to Boston, New York and Florida dealers. Since the sale of "miniature" packages is permitted only in eight states, Carillon hopes that Denis-Mounie will be able to ship quantities large enough to fill the demand in these states easily.

Retail dealer reaction to the package has been enthusiastic, it is reported, largely because the package sells itself. In most instances, the individual glass retails for approximately 70 cents, depending upon state taxes, which means that it is less expensive than the same drink would be in a bar. The boxed set of 10 is an even better buy, retailing in New York for less than $7.

BOTTLE LABEL serves also to decorate and identify the set of miniatures, helps lead those acquiring a set of glasses to buy a full bottle.

Cosmetics

1. LITTLE ANGEL of foil-laminated paperboard for Lentheric perfume has Christmas ornament head.

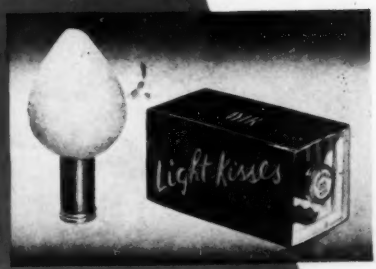
2. CLOCK BOX with printed acetate face holds Jacqueline Cochran Shining Hour toilet essence.

3. REAL pine cones, sparkle decorated, form a huggable holiday corsage for Matchabelli perfume.

4. FRAGRANCE WELL has two Rubinstein items inside an acetate cylinder; bottle holds up-ended

SHOPPER STOPPERS AT POPULAR PRICES

5. RAYON - ACETATE of satiny finish covers Lentheric Christmas Coral perfume book.



6. LAMP BULB sleeve, polystyrene foam creates Light Kisses name for Ayer lipstick package.

Decorative packaging is always the mainstay of fall and Christmas cosmetic business, but this year it will have to play an even more important role.

The Fair Trade situation and the trend to price cutting place an extra burden on the package to maintain a profitable margin through greater attractiveness or superior convenience factors.

Inroads on sales personnel due to the defense program mean that retailers will be increasingly dependent on inexperienced help and in many cases the package will have to do its own selling job on the counter or through self-service set-ups.

In overcoming these problems of retailing, manufacturers, on the other hand, have been faced with the specters of shortages and rising costs of packaging materials and production.

Early fall collections from leading firms indicate how the cosmetic industry, with its usual enviable versatility, is meeting the challenge of packaging for today's market.

There may be less elaborate trappings and gadgets than in former years in the effort to keep costs down, but the examples reveal that the utmost ingenuity is being used to produce a raft of catchy items at popular prices. There is no appreciable absence of glamour materials, or brass or plastics, so far, as most companies are still operating on stockpiles of these materials.

There seems to be new emphasis on improved packaging of staples, such as the trend to spillproof bottles for nail polish (two firms in addition to Northam Warren are now using such a feature) and plastic push-button dispensers for bottles of hand lotion.

Surveys of buyers' opinions throughout the country reflect this interest in staples which sustain volume and which move faster with added convenience features, providing the packaging can be held within limits to offer a satisfactory profit.

The interest in staples is also indicated by new make-up lines which are being added by houses such as

meet the trends

BY THE INGENUITY OF THEIR PACKAGING, LEADING FIRMS ARE STEERING A STRAIGHT COURSE BETWEEN CUT PRICES AND INCREASING COSTS

Lentheric which previously concentrated mostly on fragrances.

The traditional gift-set package containing many items seems to be losing ground in favor of the smaller combinations of one or two related items packaged with novelty appeal to retail at prices ranging from $1 to $5. While consumer income in total is high, due to the high employment level, the rising cost of living and taxes are taking such a large slice of incomes that cosmetic items must be priced to meet reduced budgets for luxury items.

MODERN PACKAGING has been observing this trend to popular-priced packaged items for several years and signs that the trend continues are reports in the trade that some of the highest-priced houses such as Schiaparelli, Lelong and others are now aiming at the $5 to $10 market.

Perfume sampling

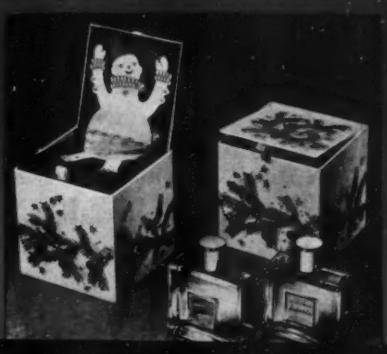
A new technique in packaging a variety of small quantities of perfumes in what might be termed sampler units is being demanded by the continuing promotion of the perfumery industry through the Fragrance Foundation to get women to use more perfume and by a more discriminating sense of scent. The trend started a couple of years ago with Gourielli's "Flowers of the Month" colognes, packaged with a special scent for each month (see MODERN PACKAGING, Feb., 1950, p. 79). *Harpers' Bazaar* furthered the idea last year with its clever promotional sampling of a few drops of 22 famous perfumes in tiny individual "bottlettes" which fitted into a mailer smaller than a package of cigarettes (see "Miniscule Samples," MODERN PACKAGING, Jan., 1951, p. 80).

Now Coty is completing a successful program with its Perfume Prize Package, a clever multiple unit sell-

7. PARIS JEWELS painted in foil-covered book box give sparkle and glitter to combination of two famous Hudnut scents.

8. REINDEER driving team of Santas gives humorous design twist to Matchabelli cologne-powder set.

9. SURPRISE element gives interest to Lentheric's Jack-in-the-Box package for Tweed and Repartee toilet essences in 4-oz. bottles.



10. GOOD TASTE is demonstrated by this Fleurissa Desert Flower item packaged in a window box.

SMALLER TYPES OF COMBINATIONS THAT ARE GAINING FAVOR

'OPEN' PACKAGES

11. SHIPPED FLAT, this open-sided carton offers dealers an extra idea to dress up Daggett & Ramsdell's Gay Manhattan products as gifts. Bottom is standard tuck. Die-cut 1890 figure takes place of top flap. The wheels are openings through which packages are visible.

12. SIDE-WHEELER steamboat idea is an open set-up box designed to the contours of a drum box of Hudnut's Yanky Clover dusting powder, with the cologne bottle giving the suggestion of a pilot house.

ing six ⅛-dram bottles of Coty's famous scents plus a seventh preview bottle of a forthcoming new Coty perfume for $2 as a part of prize contest in which $10,000 in cash (309 prizes in all) are to be awarded to entrants who give the best answer to the question, "Which of these perfumes do you like best, and why?" The aim of this package promotion is to give women an opportunity really to try the perfumes with the idea that fine perfumes like fine wines must be tried out and not selected by a hasty whiff at a busy store counter.

The Coty prize package is of die-cut, folding-box construction with the seven bottles held securely in place and a specially attached top flap which is the entry blank and gives the rules of the contest.

To establish the habit of using complete collections of luxury perfumes, Parfum L'Orle has introduced a series of what it calls its "fabulous perfume essences" in de luxe gift packages that look like cloth-bound volumes. The volumes are inscribed "Une Histoire des Parfums Français" and contain 24, 12 and 6 assorted perfumes to sell at $60, $30 and $15.

Matchabelli also is merchandising its colognes this year as a sampler collection of six fragrances in a transparent acetate hat box with a paperboard cover and die-cut paperboard platform base to hold the ¼-oz. bottles. Cedar green and candy pink are the colors combined for base and lid, topped with pink net and satin bow.

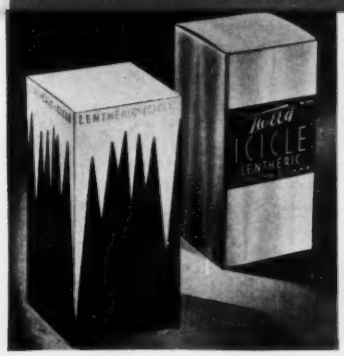
Holiday sleeves

Something gaining favor this year is the use of the holiday sleeve which can be shipped flat to the stores and added by sales people or demonstrators to dress up standard merchandise. Shulton is using two such items: one to go over a carton carrying its etched bottle of Desert Flower toilet water and the other for its Old Spice after-shave lotion. The sleeves are die cut so that when they are slipped over the carton they allow a decorative element to extend beyond the corner of the package. In the case of the Desert Flower package, this is a sparkle-sprayed outline of a stylized yucca plant; for the after-shave lotion package it is a large bull's eye which says "Season's Greetings." This green colored aluminum foil sleeve also has cut-outs in the form of Christmas-tree balls permitting elements of the standard red carton to show through. Dermetics is another user of sleeves to provide a seasonal touch for two of its regular beauty kit packages.

The "open" package

Another new idea in line with the practice of economy is the "open package." An example is the open

CHRISTMAS SLEEVES WITH UNUSUAL FEATURES



13, 14 and 15. STAPLE ITEMS are being dressed up for the holidays by the use of decorative sleeves which may be later removed. Here are three examples. Note interesting die cutting which provides extending decorative elements for Old Spice and Desert Flower, also openings in Old Spice package permitting color of the inside carton to show through.

SPECIAL APPEAL TO THE YOUNG MARKET

16. GABLED CARTON and cut-outs full-color printed and containing 15 individual envelopes of Helene Pessl Little Lady bubble bath present children's toiletry in a manner that prevents dumping contents of a larger single unit into bath all at once.

17. MILITARY THEME is used for Helene Pessl's collection of Young Lad toiletries for boys. In addition to jeep with soap sculptured soldiers shown, there are tanks, planes and battleships—all folding boxes.

18. TOY SETTING for Daggett & Ramsdell's bubble bath and snowman soap sculpture is acetate-window carton. Bubble-bath containers have paper tops that look like castles; cut-outs fit in slots.

folding carton shipped flat to dealers and demonstrators of Daggett & Ramsdell products for use with Gay Manhattan Beauty Film and Pressed Face Powder. When set up, the carton has a standard tuck base, but the top flap is die cut to form a "stand-up" figure of an 1890 belle riding a bicycle, the wheels of which are formed by two die-cut circles in the side of the carton which allow the packaged products to show through.

Richard Hudnut uses a clever "open package" of set-up box construction holding Yanky Clover cologne and dusting powder. The coverless box gives the stylized effect of a Mississippi steamboat with its "side wheels" holding the drum box of dusting powder and the cologne bottle resting in a die-cut slot to suggest the boat's pilot house.

Men's lines

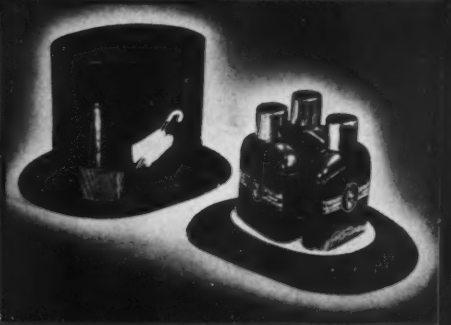
There seems to be an upswing of interest in men's lines designed perhaps to meet gift requirements for the increasing number of men in service. Most of the men's lines are simply done and there are many in the low-price bracket to meet the demand for the "extra" gift or stocking stuffer such as Daggett & Ramsdell's combination of shave lotion and lather shaving cream in a gift carton for a dollar; Courtley's men's cologne and after-shave lotion in a white, bronze and green carton called Lucky Choice, also for a dollar, and Seaforth's dollar solid-stick after-shave lotion in a gift sleeve.

Particularly interesting in this field

HEADLINERS IN MEN'S LINES

19. POPULAR PRICED combination of Courtley cologne and after-shave lotion is packaged for $1 in a colorful bronze and cypress green carton.

20. THE "STOCKING" GIFT for which there is an increasing demand prompted the packaging of Seaforth's Groomstick, a solid cologne for men, in a holiday carton to sell for $1.



21. PAPERBOARD TOPPED box provides an intriguing gift setting for three of Charbert's "Of Thee I Sing" men's toiletries in their new light-weight, shatterable brown polyethylene bottles simulating alligator-grain leather.

also is the increasing use of the polyethylene squeeze bottle because of its unbreakability and light weight for travel. Charbert's alligator-grained, brown polyethylene bottles for the "Of Thee I Sing" line is one example which are not only being attractively put up in vinyl travel kits, but in two decorative boxes, one that looks like a book and the other like a top hat. Seaforth's also has a line of men's toiletries in polyethylene bottles.

Children's toiletries

No age group is overlooked in this year's markets. Revlon has introduced what the company calls "Beginner's Luck," a manicure kit for little girls offered as the answer to every mother's question, "How shall I teach my daughter good grooming?" The kit contains emery boards, cuticle oil, paste polish, a buffer, an orange-wood stick, cotton pad and Aquamarine hand lotion.

Daggett & Ramsdell offers two children's packages containing soap sculpture and bubble bath in window cartons with toy appeal. In one of these the soap is made in the form of a snow man. Cut-out figures of children fit into slots in the back of the carton and paperboard turrets on the bubble-bath containers make these packages look like miniature castles against a printed snow-scene setting.

Helene Pessl, who continues to set a fast pace in children's packages, has introduced a very attractive gable-topped carton which is called a "Bubble Bath Cottage," holding 15 envelopes of bubble bath and cut-out figures of children that stand in slots.

For boys, Helene Pessl's collection includes a series of cartons with military appeal—holding such items as soldier soap figures, hair lotion, bubble bath and shampoo—designed in the form of a jeep, a tank, a battleship and an airplane. All come complete with cut-outs.

Catchy special promotions

The counters will also be gay with endless seasonal package promotions to intrigue the Christmas shopper. Most of the lines appear to be fairly conservative in the number of offerings, but what they lack in number they make up in ingenuity.

25. THAT LUXURY ITEMS still have a place is proved by this beautiful new French package for Nina Ricci's Coeur-Joie perfume in a Lalique crystal flacon and square white satin box.

Among the new transparent acetate presentations is Helena Rubinstein's "Fragrance Well," a miniature wishing well constructed of a cylindrical acetate container in the bottom of which is a box of dusting powder topped with a bottle of cologne which pushes through an opening in the lid of the container to support a slanted "roof" decorated with snowflakes.

Rubinstein uses polystyrene foam to make a pair of glittering slippers that hold a dram bottle of perfume. The slippers are housed in a half-cylinder box with acetate front and foil-faced paperboard back, giving the effect of a tiny mirrored show case.

For gifts to hang from the Christmas tree, Rubinstein offers its perfume Chapeau Duo—shaker talc topped with a snowman's polystyrene foam head and pillbox hat which is actually a perfume compact to match. The head with the perfume compact is also carton-packaged separately.

Bourjois, Inc., has a series of five eye stoppers for "Evening in Paris" in the popular price range including gadgets that look like bird cages, boxes with settings of jeweled snowflakes and stars, polystyrene foam bells and a clever wire wall bracket that holds two bottles of "Flower Print" colognes.

Several interesting new uses of favorite decorative materials are revealed in the Lentheric collection. A little angel doll formed of foil-laminated paperboard with a Christmas ornament head holds a filigree metal purse flacon of Tweed perfume, suitable as a tree ornament or a place favor at Christmas dinner parties.

22. COTY'S PRIZE PACKAGE of seven perfumes ties in with a $10,000 cash-prize contest for the best answer to "Which of these perfumes do you like best, and why?"

23. COLOGNE collection by Machabelli contains six bottles in a transparent acetate hat box with a paperboard base and cover.

SAMPLER TREND IN FRAGRANCES

24. DE LUXE sampling opportunity is offered by Parfum L'Orle's gift "book" packaging of 24, 12 and 6 assorted essences selling at $60, $30 and $15. Individually, they come in wood boxes.

A Lentheric "Jack in the Box" is achieved with a set-up box for toilet essences. A gable-topped carton makes a "Christmas house" for toilet essence complete with chimney formed by allowing the closure to poke through a hole in the roof. A "Christmas Carol" book box for Lentheric Tweed perfume is covered with a satiny rayon-acetate material, has a page of the music for Jingle Bells bound in and is ribbon tied with dangle bells for sound effect.

Jacqueline Cochran has appropriately packaged an ounce of her "Shining Hour" essence in a round blue box, decorated with stars and transparent acetate window printed with numbers resembling the face of a clock. A flap and gold cord are affixed for hanging on the Christmas tree.

Among the high-priced presentations is Nina Ricci's "Coeur-Joie" perfume in a heart-shaped bottle with open center made of Lalique glass resting in a white satin box—bottled, packaged and sealed in France.

Other examples that show that the well-heeled customer is not being overlooked are Lucien Lelong's $100 box of "Orgueil" dusting powder, with an ermine fur powder puff, and $25 tubes of lipstick encased in silver mink.

Dermetics makes a package of a Christmas greeting card. Inside Santa Claus's "bay window" there is a Dermetic Automatic powder puff held behind a sheet of acetate.

Prince Matchabelli's colognes are presented for Christmas in a series of cartons and set-up boxes designed with a "man-bites-dog" twist—a reindeer driving a team of Santa Clauses. Popular in the Matchabelli collection will be a package formed of real Princess pine ornamented with sparkle-sprayed cones and leaves to make a corsage holding a purse dispenser of Matchabelli perfume—a clever decorative idea to remember if other packaging materials get scarce. With perfume removed, the corsage may be pinned to a coat lapel. The corsage is housed in a set-up box with transparent acetate cover.

Glittering fake jewels are glued on the cover of a laminated-foil book carton for Richard Hudnut's RSVP and Gemey essences. Hudnut dresses up its foil boxes of DuBarry bath powder with a very feminine and appealing wrap of gold-spangled pink (*This article continued on page* 178)

KITS AND CASES OF PLASTIC AND FABRIC

26. WOVEN SARAN in plaid design makes this men's zippered travel case for five Seaforth items in polyethylene bottles.

27 and 28. VINYL SHEET offers endless variety in the design of cases for long wear that look and feel like leather. There are many examples like this Helena Rubinstein Weekender, as well as the electronically sealed small pocket cases for manicure implements and eye make-up.

29. METALLIC BROCADE evening kit by Dermetics contains lipstick, compact, Automatic powder puff.

30. SUEDED rayon pouch provides enviable promotion for Chen Yu Cloud Silk compressed powder and lipstick set.

31. PERENNIAL favorites are the satin envelopes such as this Lentheric Touch-Up kit of red satin lined in white satin.

Packaging's Hall of Fame

THIRTY-FOURTH OF A SERIES

CAMEL CIGARETTES

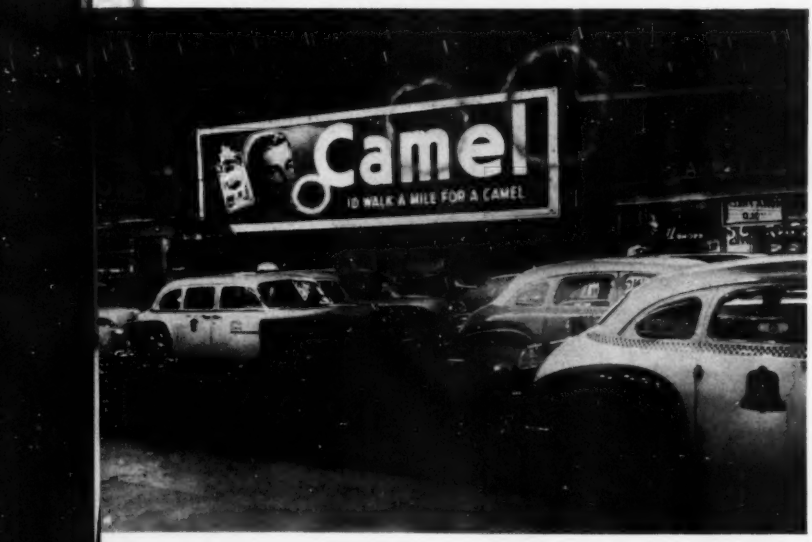
The Camel cigarette package was the subject of intense interest to millions of depression-weary Americans for eight days in the early part of 1931.

For the best answers to the question, "What significant change has recently been made in the wrapping of the Camel package containing 20 cigarettes and what are its advantages to the smoker?" the R. J. Reynolds Tobacco Co. announced that it would pay $50,000 in prizes. The contest was announced in full-page newspaper advertisements on Feb. 25, 1931; the contest closing date was midnight, March 4, 1931.

The company and its advertising agency at the time, Erwin, Wasey & Co., Inc., anticipated a maximum of 300,000 entries. They received over 950,000. One of the agency's employees who was sent down to Winston-Salem to help the company dig out from under the avalanche recalls that the sacks of mail piled up in Reynolds' offices until it looked like bedlam and the company had to rent space all over the town to provide adequate space for conscientious readers to plow through the entries, many of which were accompanied by rough sketches of camels, elaborate presentations and even stuffed, mounted camel heads.

The answer to the $50,000 question, of course, was the addition of the moistureproof cellophane overwrap to the individual Camel pack, the significance of which Reynolds explained in newspaper ads the morning after the contest closed, under the headline, "Why we spend $2,000,000 to put Camel cigarettes in the new Humidor Pack." Emphasis was placed on the results of a study by the Pittsburgh Testing Laboratory which showed that "only a waterproof material with a specially devised airtight seal could give the desired protection. . . . This measure, while costly, could be relied upon to keep Camels in prime condition for at least three months in any climate." The copy also mentioned that the $2,000,000 outlay "involved the designing of special processes and special machines."

SMOKE-RING animated sign in Times Square plugs cigarettes' most famous advertising slogan: "I'd walk a mile for a Camel!" It is seen by 1½ million people daily. This giant sign went into action late in 1941.



The use of a moistureproof, sealed cellophane overwrap to accomplish this kind of product protection is such a routine matter today that it is difficult to realize that only 20 years ago it was fully as revolutionary a step as the Camel ads indicated. It represented a new concept of the use of cellophane as a primarily functional rather than decorative material.

At the time, ordinary PT cellophane was common enough, but the moistureproof MT variety was still something of a novelty and the Du Pont company was pondering whether demand for it would justify a large expenditure for mass-production facilities. A tremendous initial order from Reynolds quickly settled that question.

At the time, too, there was no high-speed automatic equipment to wrap and seal this kind of cellophane. Reynolds took care of that by placing with Package Machinery Co. an order for more than 100 machines.

NOMINATED FOR PACKAGING'S HALL OF FAME BECAUSE:

- They pioneered the moistureproof cellophane wrap and gave far-reaching impetus to this type of packaging.
- They set standards for the industry with the cup-style 20s pack and the one-piece carton.
- Their concentration on quality, maintained by protective packaging, has for years kept them first in the cigarette sales race.
- They developed basic techniques of cigarette merchandising, including gift packaging and by-the-carton consumer selling.

Thus the Humidor Pack gave impetus not only to the manufacture of moistureproof cellophane on an economical, large-scale basis, but also to the packaging machinery to handle it —so essential today in packaging operations everywhere.

This kind of package pioneering is one clear-cut reason for Camels' nomination to *Packaging's Hall of Fame* and it helps explain a second indisputable reason: That Camel cigarettes are firmly lodged in first place in one of the world's hottest sales races, unshaken in recent years by all the advertising and merchandising wiles of their canny competitors.

The latest authoritative *Printers' Ink* sales estimates, published in January, 1951, repeat the story of previous years: Camels in first place by a much-increased margin, with 98.5 billion cigarettes sold domestically in 1950 (up 0.5% over the previous year), as against 82.5 billion for Lucky Strike (down 9.7%); 66 billion for Chesterfield (down 2.2%) and 40.4 billion for Philip Morris. Indications are that Reynolds this year will produce for domestic consumption 100 billion Camels—5 billion packages —which will account for over one-fourth of total U.S. production. Camel revenue stamps alone cost "well over" $1 million each working day.

There are other Camel packaging "firsts."

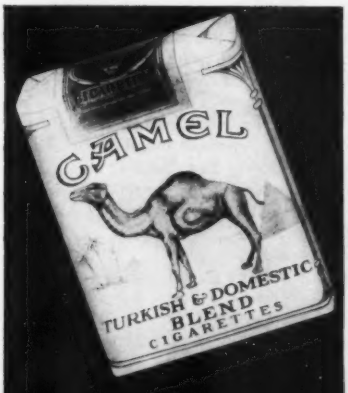
As part of the complete Camel package, the carton has been of special interest to the company. The single-piece, folding-style cigarette carton, assembled automatically from blanks, was originally designed for Camels to increase the speed of their packaging operations. Since its appearance, other companies have also adopted this style of carton.

Camel was also one of the first brands to be offered in specially designed gift cartons—a packaging feature that evolved from Reynolds' continuous emphasis on the importance of the carton to achieve multiple-unit sales.

There are specific innovations in the mechanics of cigarette packaging for which Camel is credited. There is, in addition, the fact that R. J. Reynolds was the first cigarette manufacturer to realize fully the significance

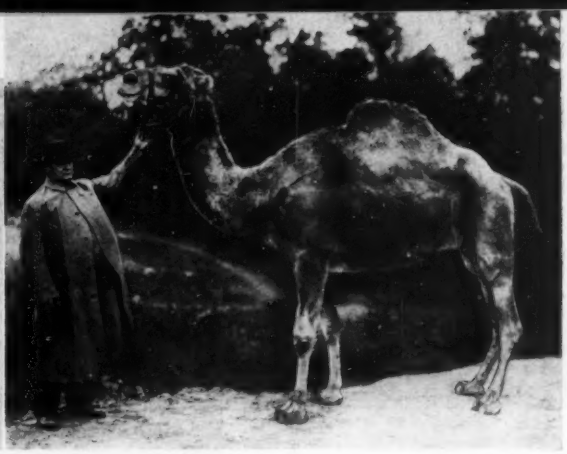
THE PACKAGE that Camel introduced 38 years ago has become the standard for an industry producing nearly 20 billion packages a year—over a quarter of them Camels. One-piece carton originated with Camel.

ORIGINAL PACKAGE as nationally introduced in a *Saturday Evening Post* advertising spread on December 12, 1914.



PACKAGE TODAY appears unchanged except for cellophane wrap and tear tape for handy opening.

HERALDING introduction of the brand nationally in 1914 was a series of teaser ads like this one. The series consisted of four ads, the final one under the banner "Camel Cigarettes are Here" appeared the day that Camels were placed on sale.



THE REAL CAMEL was borrowed from Barnum & Bailey Circus at Winston-Salem in 1913, thus photographed, and a sketch made by artist from photograph. Note accurate reproduction of pose in this ad and Camel package. Sketch has been reproduced on more than 50 billion packages, making this the world's most-pictured animal.

of the distributive function of packaging in merchandising and advertising this product.

The familiar "20s" cup-style pack is now recognized as standard for cigarettes in the popular-price bracket in the U.S., yet most of our mid-century adults can vividly recall its predecessors—the different styles of paperboard boxes, holding varying counts, which were used prior to World War I. Many of them can also remember when they could buy a couple of loose cigarettes for a penny.

To see the present-day cigarette cup pack primarily as a protective package overlooks the real importance of the 20s pack; its distributive function. It presents cigarettes in a convenient count that, although originally chosen largely because of price, is also a unit easily figured in multiples. It is a convenient package in size and shape to handle throughout the distribution channels. Last but not least, the cost of the 20s pack is reasonable; it is estimated that if cigarettes were to be sold singly today, each one would cost three times as much as does one in the pack.

Introduction of Camels in the 20s cup pack in 1913, with the brand's quick rise to unprecedented sales totals, was a decisive factor in establishing this package form, which has been reproduced hundreds of billions of times.

Richard Joshua Reynolds didn't exactly follow the advice given in Camels' most famous slogan when he started out to establish the company that would later make Camels, but he did ride 50 miles horseback from his father's farm in Patrick County, Va., to Winston, N.C., where he planned to start his own business manufacturing chewing tobacco.

At the age of 24, young Reynolds knew this business well, since he had helped his father raise and make chewing tobacco ever since he was old enough to work. It was Richard who peddled the chewing tobacco by wagon over the toll roads in the southwestern section of Virginia and into the eastern part of Tennessee and Kentucky.

On a site in Winston still occupied by one of the many buildings of the present R. J. Reynolds Tobacco Co., Richard opened his first manufacturing plant in 1875. The small, two-story, frame building, which cost him $2,400 of his hard-earned capital, had an area no larger than a tennis court and he employed a mere handful of helpers, mostly on a part-time basis.

In contrast, last year, when the company marked its 75th anniversary, there were more than 12,000 persons on the payroll and the physical properties right at Winston-Salem (the two cities became one in 1913) totaled scores of buildings including a 21-story office building that dominates the skyline for miles outside the city. It is the largest tobacco-manufacturing plant in any city of the world.

Today, Camel cigarettes account for over 90% of Reynolds' total sales. Based on an annual report of $760 million for 1950, that would be around $685 million for Camels.

Reynolds' nationwide fame was established with Prince Albert smoking tobacco, which was introduced in 1907. Made by a special process developed by the company, "Prince Albert" brand became the largest-selling brand of smoking tobacco within a few years.

Consumption of cigarettes developed in this country from 1900 on. By 1910 Reynolds officials had decided definitely to add cigarettes to the company's group of tobacco products, but Mr. Reynolds was adamant that his name should stand behind a cigarette that had the same high quality as his other products. Two years were thus spent in research and experimentation with different blends.

When Mr. Reynolds tried the particular blend finally selected for Camels, it is reported, he was so sure that its mildness and flavor would prove a winner that he said, "I'll back it with every cent I've got." This blend was composed of Turkish and flue-cured tobaccos plus burley and, later, Maryland tobaccos.

Within three years after its introduction, Camel was the largest-selling cigarette. The company's total sales jumped from $12 million in 1910 to $195 million in 1920.

Certainly Camels' claim to fame does not rest on any history of package-design modernization. It is char-

acteristic of this *Packaging's Hall of Fame* series (in contrast to the usual MODERN PACKAGING story which is concerned with something new and different in design) that the packages nominated usually show little or no basic change in the trademark and package surface design through the years. It may be significant that the producers of the most famous packages seem to have been fortunate enough to have hit upon a good, ageless design at the start—and intelligent enough to stick with it.

But whereas there are few of these packages that have not required some subtle modernization of lettering or re-arrangement of copy at some time or other, the Camel package surface shows not one iota of change—so far as the eye can see—from the very first pack that appeared in 1913. No one can dispute the claim that this package is the best selling instrument in the cigarette world today.

The distinctively lettered brand name "Camel" and the hump-backed animal himself together form one of the world's most widely known trademarks. The line drawing of an oriental mosque on the back panel (a suggestion of which will be seen in our cover illustration) has likewise been a part of every Camel package ever produced.

In the beginning, after many months of consideration, "Camel" was chosen as the brand name because, among other reasons, it provided an immediate association with the Orient (cigarette brands with oriental names were generally the most popular at the time—Murad, Fatima, Mogul, Turkish Trophies, etc.) and also this association was particularly appropriate to the new blend which contained Turkish tobaccos.

A most fortuitous circumstance provided the illustration to go with the name.

The Camel name has just been decided upon when Barnum & Bailey's Circus came to town. A featured attraction in the circus menagerie that year was a tall, Arabian dromedary. As was the custom in those days, when the circus arrived Reynolds closed down operations so that all employees could attend. One of the staff members was so impressed with the magnificent camel that he thought a picture of this animal would be effective as the illustration on the new cigarette package. With the permission of the circus, a photograph was taken of the beast in profile.

Reynolds executives liked it and from this photograph (reproduced herewith) the famous camel was drawn for the package. The artist added the background of palm trees and the pyramids associated with the camel's native habitat.

At the time this Camel package was being planned, premiums and souvenirs were commonly used to promote the sale of cigarettes. Mr. Reynolds would have nothing to do with this; he wanted to promote his cigarette solely on the basis of its quality. The words "Choice Quality" had already been selected for one side panel even before the brand name was picked.

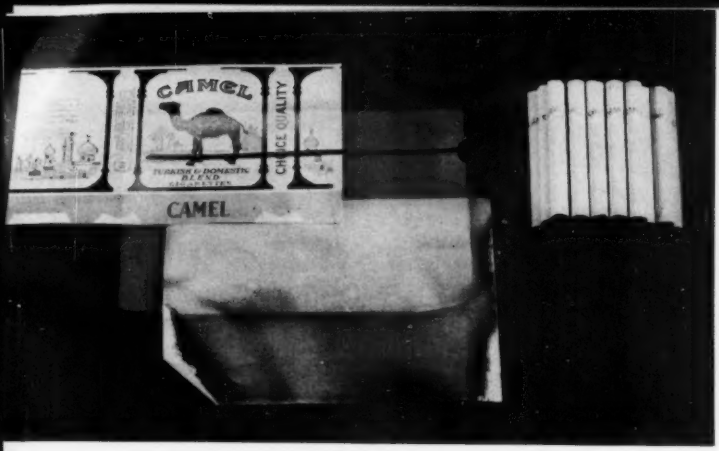
In addition, Mr. Reynolds wanted

The CAMELS are coming!
$50,000
REWARD
for the best answers to these questions
What significant change has recently been made in the wrapping of the CAMEL package containing 20 cigarettes and what are its advantages to the smoker?
Contest open only until MIDNIGHT, MARCH 4, 1931
Why we spend $2,000,000 to put CAMEL cigarettes in the new HUMIDOR PACK

ANNOUNCEMENT of $50,000 contest with which Camels in 1931 called unprecedented attention to their greatest packaging scoop—the first moistureproof cellophane wrap. This full-page ad appeared throughout the country, drew nearly a million entries.

EXPLANATION of the $2,000,000 packaging achievement appeared in same media day after contest closed. Painstaking care with which Camel has sought to protect freshness of "choice quality" tobacco is accounted a major factor in brand's success.

GIFT CARTON was a Camel idea for promoting the sale of cigarettes in cartons. The regular khaki-and-blue carton is illustrated below, together with the current Christmas, Father's Day and Valentine cartons.



SIMPLICITY and economy of the package that encloses 20 cigarettes is revealed by this view illustrating the flat components of the package: paper-backed foil, printed wrapper and cellophane with tear tape.

a plain statement about premiums to appear on the back of the package. When he wanted to do some serious thinking it was his custom to leave his office, drive out to his farm near the city and sit in the carriage meditating. Out of one of these deliberations, it is reported, came the 21-word declaration which is still printed on the back of every package: "Don't look for premiums or coupons, as the cost of the tobaccos blended in CAMEL Cigarettes prohibits the use of them."

While it took months to arrive at the brand name and package design, it was agreed at the start to use the cup-style package holding 20 cigarettes. Although Camel was apparently the first of today's top brands to use the 20s cup pack, it did not originate it; credit for that, according to trade historians, goes to Fatimas.

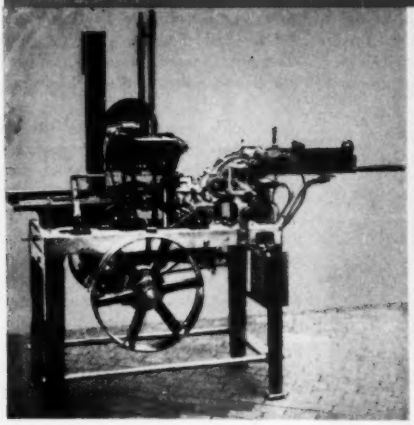
The cup pack at that time relied for its moisture protection on a heavy layer of tin foil, which was tacked to the liner paper by a narrow glue line around the edge. The later development of aluminum foil that could be directly laminated to the liner paper, plus the moistureproof cellophane overwrap, permitted much lighter weights of metal to be used.

The cup-style pack was distinctive, it could be produced economically and its functional properties were deemed excellent, both from the protective and the distributive standpoints. Mr. Reynolds, it is said, argued this last point especially, since he was well aware of the problem of getting the new cigarette accepted by the trade as well as the public.

Along with the individual pack, the company planned from the beginning to use a carton which would contain 10 packs. Originally, it was a two-piece, full-telescoping paperboard box, perfectly plain except for the printing of the brand name and product description in the distinctive lettering used on the pack's front panel. This printing appeared on the top, sides and ends of the cartons, which were overwrapped with glassine paper for additional protection and packed in wooden cases that were corded and sealed with lead.

Changes since have been few and simple. The wooden shipping case was replaced by a corrugated shipper in 1916. The one-piece folding carton was first used in January, 1933. The moistureproof cellophane overwrap was applied to all individual packs shipped after December, 1930. Finally, the change to the laminated-foil inner package was made in 1946,

The packaging of camels



FIRST OVERWRAP machine, developed especially for Camels' cellophane wrap and shown in MODERN PACKAGING in 1931 gave first big impetus to moistureproof cellophane.

THEN

EARLIEST MACHINE for cup packaging of Camel 20s, as used in the Winston-Salem plant in 1914. Reynolds fathered many mechanical developments in cigarette packaging. Currently, each fully automatic machine turns out 1,000 cigarettes a minute.

although aluminum foil had replaced the original tin foil some years previously. The convenient red cellophane tear tape was added in 1948.

The cellophane era

The need for some kind of package overwrap to help maintain moisture and aroma in the tobacco was beginning to be recognized by most cigarette companies in the 1920s. By 1929 most of the big brands had adopted a semi-transparent glassine wrap and at least one is believed to have used some PT (non-moistureproof) cellophane.

But Reynolds was holding out for something with a higher protective level and when a Du Pont representative brought a sample of the newly developed MT (moistureproof) cellophane to Winston-Salem early in 1929, company officials immediately recognized its possibilities. They were not daunted by the fact that no machinery existed that would put this material on the package with all joints tightly sealed; they felt that suitable machinery could be developed and, if so, they were in a position to steal a march on competitors who were committed to non-transparent and non-moistureproof wraps using a different type of machinery.

An SOS went out to packaging-equipment manufacturers. What happened next is vividly recalled by George A. Mohlman, now chairman of the board of the company that solved the problem.

The MT film was not heat sealable, in the present-day sense of the word, but "more by luck than good management," says Mr. Mohlman, "Packaging Machinery Co. discovered that methyl cellosolve would do the trick if it was applied in a thin strip to the cellophane and then heated. This involved a sort of plumbing system, but it proved effective and Package Machinery Co. got a large order to take care of the production of Camel cigarettes.

"Du Pont," says Mr. Mohlman, with pardonable exaggeration, "was rocked on its heels by getting an order for some hundreds of thousands of pounds of moistureproof cellophane a month and the Union Carbide company collapsed when they received orders for methyl cellosolve in carload lots!"

In illustrating the new "Tight-Seal" wrapping machine as developed for Camels, in its April, 1931, issue, MODERN PACKAGING reported that it operated at a speed of about 110 packages per minute and marked "the first time that any package has been mechanically wrapped to give a thoroughly moistureproof job."

Other cigarette manufacturers soon fell into line and sealed moistureproof cellophane in a few short years became the accepted protection not only for cigarettes, but for hundreds of other perishable products. The development opened up a vast new market for packaging machinery, in which Package Machinery Co. remains a dominant factor.

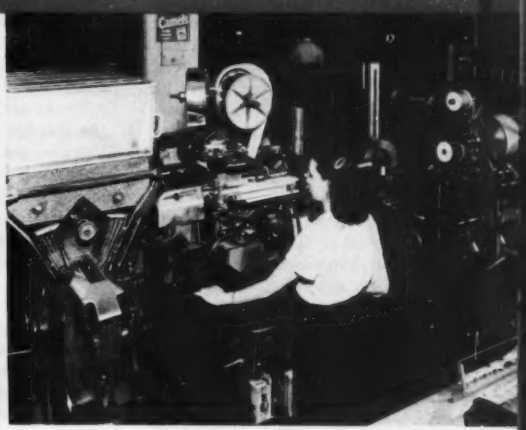
Du Pont began construction of its Richmond, Va., cellophane plant and was forced also to expand its Buffalo plant to take care of the soaring demand for moistureproof cellophane.

To Reynolds, the cellophane overwrap was the final assurance that the quality of Camels would be the same regardless of whether a pack was bought factory fresh in Winston-Salem, in dry, mile-high Denver or in tropical Miami. These cities, among others, received cellophane-wrapped Camels for several months prior to the contest, as part of Reynolds' final in-the-field packaging test and by the time the contest was announced tobacco retailers throughout the country generally had a supply of the new overwrapped packs on hand.

Promotional policies

The all-out battle of the cigarette brands in the last 30 years has been one of the rewarding spectacles of American advertising. To the casual observer it would seem that the leading brands, in the long run, are pretty much even-Stephen in the sound and fury of their cleverly contrived cam-

— then and now



PACKAGING TODAY in the world's biggest cigarette plant at Winston-Salem is one of packaging's most highly mechanized operation. The photograph above shows one packaging section of R. J. Reynolds Tobacco Co. plant.

NOW

CLOSE-UP SHOWS, in foreground, the 1951 successor to the crude 1914 cup-packaging machine. Illustrated at right is a modern cellophane-overwrap machine, with tear-tape attachment.

EARLY DISPLAY, used in 1916, shows Camels' pioneering effort to get cigarettes out on the counter, inviting competitive brands to be shown along with Camels. Most other brands were packaged in boxes then.

TODAY'S DISPLAY technique follows same principle of providing space for other brands, too, but the emphasis now is placed on carton sales. There is a Camels rack at each of the 20 check-out counters in this New Orleans super market.

paigns. The Federal Trade Commission has recently stated that one brand of popular cigarettes is pretty much like another and that there is "no significant difference" in their nicotine, acid or throat-irritant content.*

No cigarette company would agree with the FTC's statement, for there are something like 100 different types and grades of tobacco recognized by the Department of Agriculture and it is the choice of ingredients and their blending, they say, that produces the differences that most smokers recognize among brands. But it is a fact that, since Camels led the way in 1931, all leading brands have had virtually identical packaging.

How, then, to account for the fact that Camels continue to lead the field in sales by close to a 20% margin over their nearest competitor (Lucky Strike)? What subtle difference can we find in Camels' presentation of its product?

If there is any clear answer to these questions it probably goes back to Mr. Reynolds' insistence that *quality* should be stressed. The "don't look for premiums" notice on the back of the original package set the theme and the exploitation of the Humidor Pack in 1931 re-affirmed the smoker's impression that the makers of Camels would spare no expense to give him the best in cigarette quality.

But in playing this theme, Reynolds showed from the first an exceptional talent for showmanship and a rare ability in mass distribution.

After being quietly test marketed in certain sections of the Midwest and East during 1913, Camels were launched on a nation-wide basis in December, 1914, by means of a gigantic advertising campaign that included a series of teaser ads recently cited in Julian Lewis Watkins' book as among "The 100 Greatest Advertisements."

Carried out under the direction of N. W. Ayer & Son, these ads started to appear in local newspapers a few days ahead of the Camel introduction in the community. On the first three ads the illustration was that of the camel in profile as it is on the package, with different copy each time. The first was simply the word "Camels." The second announced, "The Camels are Coming!" The third made the prediction, "Tomorrow there'll be more Camels in this town than in all Asia and Africa combined," and the next day, when the cigarette actually arrived, the final ad appeared with the headline, "Camel Cigarettes are Here!"

In the final ad, the package was illustrated and the quality theme was emphasized in the copy by such phrases as, "Here is a cigarette made of *blended* choice Turkish and choice domestic tobaccos that produces a finer flavor, a better fragrance, than either kind of tobacco smoked straight. Camel cigarettes *will not* sting the tongue and *will not* parch the throat. They *do not* leave any unpleasant cigaretty after-taste. . . ." The ad also contained a refund offer and it was worded to suggest that, in trying the new Camels, the smoker should buy a carton of them.

The newspaper teaser series was followed by advertisements in mass-circulation magazines, starting with a double-page ad in the Dec. 12, 1914, issue of *The Saturday Evening Post* that is believed to be the first edition of that magazine ever to carry a cigarette ad.

While quality was expressed more succinctly in the first ads, one sees even then the embryo of later Camel copy themes in which quality is interpreted in terms of "mildness" and "flavor."

The brand's most famous slogan, "I'd walk a mile for a Camel," was introduced in 1921. Millions of people have read and quoted this slogan since its first appearance. It is estimated that 1,500,000 people see it daily when they pass Camel's famous "smoke-ring" spectacular on New York's Broadway at Times Square. This giant animated sign went into action late in 1941. *Tobacco World* in its January, 1942, issue referred to it as "a sign that lives, being the first sign ever to breathe."

Well-remembered Camel ad campaigns of the past decade that have pointed up the quality theme include the World War II series, featuring branches of America's Armed Forces and carrying tie-in slogans such as "First in the Service" and "The Service First"; the famous "T-Zone" presentation (T for Taste and T for Throat), which first came into the advertising picture for Camels nearly 10 years ago and still appears in ads today, and the "Experience is the best teacher" campaign that began in 1947 and led into the one devoted to the "Camel 30-day mildness test."

Reynolds spent more than $200,000 in Camel advertising the first (*This article continued on page 173*)

* *New York Herald Tribune*, June 29, 1931.

Shipping-case economy

SCIENTIFIC DETERMINATION OF THE ONE BEST WAY TO ARRANGE PACK WILL SAVE BOARD AND PRODUCE A BETTER SHIPPER.

By T. J. Muldoon*

Shipping cases are strictly utilitarian objects which have but one real purpose—the delivery of merchandise from one point to another in good condition. Thousands of dollars and large quantities of board are wasted annually by shippers who assume that if a case performs the above function it is the best case for their product. For this reason the present shortage of corrugated board actually may prove beneficial to conscientious packers since, in complying with Government requests that effort be made to conserve board, they will review their case specifications and packing arrangements. In so doing they may find that a different arrangement of cartons in the case would produce a pack that is stronger, easier to handle and which uses less board.

In studying the various possible ways that the cartons or other unit packages can be packed in a case, it is necessary to consider not only the factors that will influence the final selection of the correct case, but it is equally important to make certain that all of the possibilities have actually been considered before the final choice is made. This may seem like an imposing task since there are 108 different possible cases that can be used for shipping 24 cartons and there are 162 different ways that 48 cartons can be packed. Fortunately, the great majority can be eliminated without detailed consideration.

There are two ways of investigating the problem. It is possible simply to take the required number of cartons, move them into various positions and consider each arrangement in turn. This method is the one most commonly used and it very frequently results in the selection of the best possible case. On the other hand, it often fails. The major difficulties with this system are that the best case may be completely overlooked or given insufficient consideration, that one person makes the decision and that no record is made of considerations in making selection.

If an attempt is made to describe any one arrangement to another person it is necessary to specify not only the number of cartons along the length, the width and the depth of the case, but also the panels of the case toward which two of the carton panels face. This results in an expression such as "the cartons are arranged 4 by 3 by 2 facing the side of the case with the tops of the cartons toward the top panel of the case." It is difficult to visualize one such arrangement and when three or four must be considered, the result is confusion.

To overcome these difficulties, a system has been devised which makes certain that each of the possible arrangements is considered and which, by means of a coding system, specifies the exact arrangement.

Table I is a chart of the various possible arrangements that can be arrived at with a given number of cartons. It is also a time table listing the order in which the arrangements are to be considered. The reference line mentioned in Table I is an imaginary line drawn across in front of the observer. (In practice, the edge of a table is used.) This is the line against which the cartons are placed during the arrangement study.

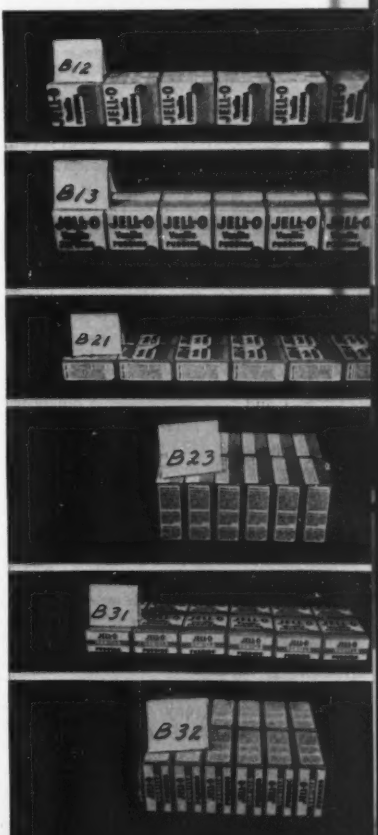
The best way to illustrate how the system works is to follow the steps involved in making a typical study to find the best case for 12 cartons.

In Table I, the 12 by 1 by 1 (Code A) arrangements are considered first. In most studies the A arrangements can be eliminated immediately because of the exceptionally long cases that they require. The 6 by 2 by 1 (Code B) arrangements usually have some merit and must be considered in more detail than the A arrangements. Fig. 1 shows photographically the six possible ways that cartons can be arranged 6 by 2 by 1.

These six groupings differ from each other only in the way the panels of the cartons are placed with respect to the reference line. Each of them was arranged in accordance with the description in Table I. As an example, in the Code B12 arrangement shown at the top of the picture, the "B" denotes that the cartons are arranged 6 by 2 by 1; the "1" indicates the face panels of the six cartons are along the reference line and the "2" means the cartons are resting on their sides.

In actual practice, all six of the B

1. SIX POSSIBLE WAYS that 12 Jell-O Pudding cartons can be arranged 6 by 2 by 1. The numerals are taken from Table I. In this case the B23 arrangement was found to be most practical.



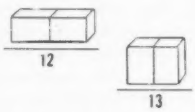
* Project Leader, Packaging Research, General Foods Corp., Hoboken, N. J.

TABLE I — POSSIBLE ARRANGEMENTS OF CARTONS IN A CASE

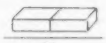
Code letter	8 cartons	Code letter	12 cartons	Code letter	18 cartons	Code letter	24 cartons	Code letter	36 cartons	Code letter	48 cartons
A	8x1x1	A	12x1x1	A	18x1x1	A	24x1x1	A	36x1x1	A	48x1x1
B	4x2x1	B	6x2x1	B	9x2x1	B	12x2x1	B	18x2x1	B	24x2x1
C	2x2x2	C	4x3x1	C	6x3x1	C*	8x3x1	C	12x3x1	C	16x3x1
		D	3x2x2	D	3x3x2	D	6x4x1	D	9x4x1	D	12x4x1
						E	6x2x2	E	6x6x1	E	8x6x1
						F	4x3x2	F	9x2x2	F	12x3x2
								G	6x3x2	G	8x3x2
								H	4x3x3	H	6x4x2
										I	4x4x3

Each of the numeral combinations shown above can be arrived at with the cartons arranged in six basically different ways, all of which must be considered. These six variations are described below:

1. The face panels of the cartons can be set along a reference line with
   (2) the cartons resting on their sides, or with
   (3) the cartons resting on their bottoms.



*2. The sides of the cartons can be set along a reference line with
   (1) the cartons resting on their faces, or with
   *(3) the cartons resting on their bottoms.



3. The bottoms of the cartons can be set along the reference line with
   (1) the cartons resting on their faces, or with
   (2) the cartons resting on their sides.

* Any given arrangement can be characterized by one letter and two numbers, e.g., with a 24-carton pack, the C-23 arrangement has the cartons arranged 8x3x1 with the sides of the cartons along a reference line and with the cartons resting on their bottoms.

Each arrangement can have the case flaps covering:
(a) the largest panel
(b) the intermediate panel
(c) the smallest panel

arrangements would not have been photographed. As a general rule, in this preliminary investigation all arrangements are eliminated which have one dimension that is more than two and a half times as great as either of the other two dimensions. Following this rule, the B12, B13, B21 and B31 arrangements obviously would have been discarded before the pictures were taken. The B32 arrangement is closer to being acceptable; however, here, too, measurements showed one dimension was more than two and a half times one of the other dimensions and this arrangement also would have been eliminated. Of the six B arrangements, the only one that would have been given further consideration is the B23 arrangement.

Before photographing the B23 arrangement or any of the other arrangements found suitable, small tags bearing the Code Letters "a," "b" and "c" would have been placed on the block of cartons to identify the three panels on which the case openings could be located. This part of the procedure is described at the bottom of Table I.

Fig. 2 shows the 48-package Jell-O Pudding case with the openings on the largest, the intermediate and the smallest panels.

In addition to labeling the panels of the case, the dimensions of the block of cartons are taken and are recorded on a Case-Arrangement Check List (see illustration) along with other pertinent data. In the section marked Possible Arrangements, each arrangement is checked as it is considered and a mark is made to indicate whether it is rejected or photographed. In the section labeled Pictures Taken, the correct Code Number is entered and the dimensions of the block of cartons are recorded. The top part of the Check List is used to record all the pertinent data on the product being considered. The bottom section is a list of the major factors that must be considered in the final selection of the correct case for the product.

After photographing the B23 arrangement, the C and D arrangements are studied in exactly the same manner. In each consideration, either the pack is eliminated because of the dimensions or else a picture is taken of it. In this way it is certain that the optimum arrangement has not been eliminated and all of the better packs will receive detailed study. Usually it is not necessary to take more than six or seven pictures, since the majority of the arrangements can be eliminated by their dimensions.

The pictures are then studied in detail and each arrangement is checked against the list of factors at the bottom of the Check List. In a moderate-sized company one man probably would have sufficient knowledge of the entire operation to make the decision himself. In a large company, such as General Foods, the operating divisions are widely scattered and the packing-line procedures vary considerably from plant to plant. It is good practice under these conditions to consult with the company experts on packaging machinery and materials-handling procedures.

With a set of the pictures in front of him and with his knowledge of the plant layouts, the machinery expert can determine which arrangements are feasible from the standpoint of case loading and sealing. Very often a case arrangement which is ideal in most respects has to be rejected because it would require extensive alterations in existing case-loading equipment or would be unsuitable for a hand-packing operation.

The materials-handling engineer considers each of the arrangements from the standpoint of load locking and utilization of pallet space. From his knowledge of the available space in each of the plant warehouses and of the methods used for handling the merchandise, he may reject a case because it will not fit on the pallets used or the cases cannot be interlocked to form stable warehouse stacks.

Before the final decision is made, it is necessary to have cost figures on the more likely cases. These are obtained from the case supplier. With

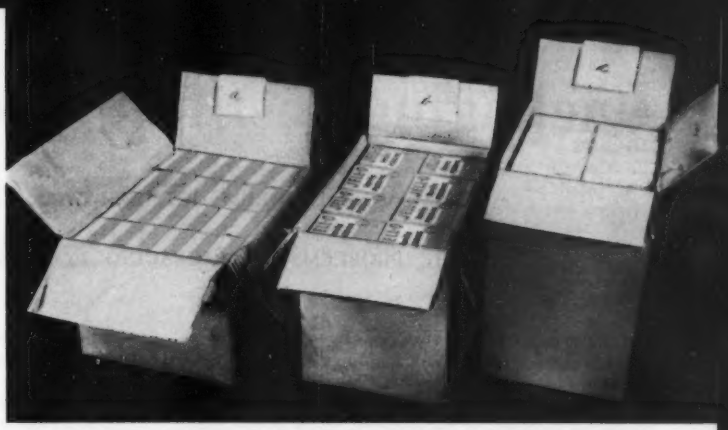
all of the data on hand, it is then possible to proceed with the selection of the case for the product. As in the preliminary investigation, a process of elimination is used except that whereas only size was used as the basis for elimination in the preliminary considerations, all of the factors —such as cost, stacking strength, ease of loading, ease of handling, etc.—are now used. On the basis of all of the information, it is usually possible to eliminate all but one or two cases. If two remain, the advantages and disadvantages of each are weighed and one of them is selected.

Although it is not always necessary, experience has shown that it frequently is desirable to consult with the plant manager and with the merchandising group before making a final recommendation. On several occasions it was found that a case, satisfactory in all other respects, could not be used because the nature of the product required that it be packed in the case in one specific manner. In the same way, all products do not pass through the same trade channels. This also imposes restrictions, particularly on the products which have a price-marking circle printed on the label. When the chief outlet for one of these products is through super markets, the price-marking spots must be readily available when the case is opened; otherwise they will not be used.

The entire procedure may seem to be quite lengthy and unnecessarily complex especially when compared with the more common procedure where cartons are moved around until a likely looking arrangement is arrived at. However, the present system was developed only after the usual procedure had been tried numerous times and had failed on several occasions.

Since the arrangements are considered in a definite order, the taking of pictures does not require as much time as it would if, after each picture, the next arrangement had to be decided upon.

The procedure described above has been used successfully during the past year for studying the arrangement of the cartons in cases for a number of General Foods products. In the majority of these studies it was possible to recommend a case that would, at one and the same time, carry the product better and be less expensive than the case in use.



2. ARRANGEMENTS offer a choice of three different panels to be uppermost in the shipping case—end, front or side. Location of a price spot, which should always be uppermost, will often settle this question.

CASE-ARRANGEMENT CHECK LIST

PROJECT NO._____ PAGE _____

CODE NO._____ PRODUCT _____ DATE _____

CASE SUPPLIER _____ DIMENSIONS _____

STYLE _____ FLUTE _____ JOINT _____

NO. COLORS _____ CERTIFICATE _____ RULE 41 _____ COST _____

CONTENTS _____ DIMENSION OF INNER PACK _____

VOLUME PER YEAR _____ (INFO FROM _____)

RELATED PRODUCTS

CODE NUMBER	DESCRIPTION	VOLUME PER YEAR

POSSIBLE ARRANGEMENTS

		A	B	C	D	E	F	G	H	I
1	2									
	3									
2	1									
	3									
3	1									
	2									

PICTURES TAKEN

CODE NO	DIMENSIONS

CODE NO	DIMENSIONS

FACTORS TO BE CONSIDERED

Loading		Shape	
Sealing		Opening	
Handling		Flap Cap	
Palletising		Type Tape	
Rule 41		Score Tearing	
Cost		Printing	
Stacking Strength		Off Center Stacking - Long	
Price Marking		Off Center Stacking - Short	

Packaging Institute program

13TH ANNUAL FORUM OCT. 22-24 WILL GIVE SPECIAL ATTENTION TO THE PROBLEMS OF PACKAGING IN A 'GUNS AND BUTTER' ECONOMY

More than 20 technical papers, seminars on package-production problems and a full day devoted to Government controls and military packaging will comprise the three-day program for the 13th Annual Forum of the Packaging Institute, to be held Oct. 22-24 at the Hotel Commodore, New York.

The emphasis on technical subjects is in line with a recent trend by the Institute in this direction, fulfilling what many believe to be the organization's proper function. The demand for discussion of various technical topics was so strong that it was necessary to schedule four concurrent sessions on the morning of Tuesday, Oct. 23, which has been designated as "Technology Day." There are, however, other sessions designed to interest the entire range of packaging personnel, from top management to the shipping room.

The first day, Monday, will include a discussion of "Problems of Military Packaging" by a panel of Government and industry authorities headed by Heinz Loeffler, packaging adviser to the Munitions Board, a luncheon to be addressed by a top Government official and a session on "Problems of Government Controls" to be chairmaned by Robert de S. Couch, newly appointed director of the Containers & Packaging Division of the National Production Authority.

The technical sessions on Tuesday morning are split into four meetings: one on "Package Printing," with E. H. Balkema as chairman; one on "Package Evaluation Procedures," dealing with unit packages, under Dr. L. E. Simerl; one on "Package and Container Evaluation," dealing primarily with shipping containers, under Allyn Beardsell, and a "Food Packaging Seminar" headed by Dr. Walter A. Maclinn. The package printing session will continue in the afternoon, after a luncheon recess, and will run concurrently with a seminar for drug and pharmaceutical representatives, headed by Dr. John C. Bird. Each of these technical sessions has five or six papers scheduled.

Wednesday's general membership meetings, morning and afternoon, will be devoted to seminars on "Line Production of Packages," although the petroleum group will be holding its all-day seminar concurrently. Wednesday's meetings will be broken by a luncheon at which reports on committee work and other Institute activities will be read. Speakers will include President Charles O. Kendall and F. S. Leinbach, general chairman of the Technical Committees.

Aside from the Monday and Wednesday luncheons, the only social function will be a cocktails-and-sandwiches party from 6 to 8 p.m. on Tuesday. There will be no banquet.

Technical committees not involved in the package printing and drug meetings on Tuesday afternoon will meet at 2 p.m. at various locations around the hotel. Some of these meetings will be open to visitors and some closed; members and visitors are advised to consult the final program which will be given them at registration Monday. Committees having separate meetings include Adhesives, Export, Films & Foils, Food, Glass Container, Packaging Education, Paper, Parenteral Closures, Shipping Container, Production Line and a newly formed Printing sub-committee on aniline printing.

As usual, the Forum sessions are open to non-members as well as members of the Institute, upon payment of registration fees. The fee for non-members is $20 for the entire Forum or $10 for a single day; for members, $15 and $7.

Herbert T. Holbrook is chairman of the Program Committee, assisted by Mr. Balkema, Dr. Bird, Mr. Couch, E. R. Hamm, R. Chester Reed, John A. Warren and President Kendall. Frank Greenwald heads the Greeters Committee, which will be on hand when registration starts at 9 a.m. Monday, while E. B. Dennis, Jr., is chairman of the Entertainment Committee.

General arrangements for the Forum have been made by Dr. L. V. Burton, executive director of the Institute.

The program follows:

Monday, October 22

9:00 a.m.—Registration — Grand Ballroom Foyer

10:00 a.m.—Call to Order — Grand Ballroom
President's Greetings by Charles O. Kendall
Introduction by Program Chairman, H. T. Holbrook.

10:10 a.m.—*Problems of Military Packaging*, panel of Government and industry representatives, Heinz Loeffler, Packaging Adviser, Munitions Board, chairman.

12:15 p.m.—Membership Meeting

12:30 p.m.—Luncheon — Grand Ballroom
Washington Report. (Speaker to be announced.)

2:00 p.m.—*Problems of Government Controls* — Grand Ballroom
Panel of Government and industry representatives, Robert de S. Couch, Director, Containers & Packaging Division, National Production Authority, chairman.

Tuesday, October 23

9:00 a.m.—Package Evaluation Procedures
(Concurrent Session) — Parlor A
Dr. L. E. Simerl, Marathon Corp., chairman.

1. *The Gelbo Instrument*, J. Hartley Bowen, Jr., and Phillip A. Gelber, U.S. Navy.
2. *New Test for Evaluating Insect Resistance of Packaging Materials*, Dr. Willis Van Horn, Institute of Paper Chemistry.
3. *New Seal-Strength Tester for Coated Papers*, John W. Padgett, Moore & Munger, and E. A. Yermakoff, General Foods Corp.
4. *Conditions Affecting the Seal Strength of Waxed Paper*, George Mueller, Marathon Corp.

5. *The Mercury Blocking Test for Coated Papers*, Morris Kane, Kalamazoo Vegetable Parchment Co.

9:00 a.m.—Package and Container Evaluation
(Concurrent Session) South Room (Lobby Floor)
Allyn Beardsell, Container Laboratories, Inc., chairman.

1. *New Test Method for Evaluating Case Fatigue*, Charles J. Zusi, Container Laboratories, Inc.
2. *How Long Can Corrugated Fibreboard Boxes Be Safely Stacked?* K. Q. Kellicutt, Forest Products Laboratory.
3. *A Guide to Effective Package Designing*, W. F. Deveneau, National Folding Box Co.
4. *The Technical Side of Developing a Printed Package*, Paul Cope, Procter & Gamble Co.
5. *The Economics of Container Design*, Charles F. Carr, Standard Brands, Inc.

9:00 a.m.—Food Packaging Seminar
(Concurrent Session) West Ballroom
Dr. Walter A. Maclinn, Rutgers University, chairman.

1. *A Package Method for Measuring Free Oil*, A. H. Landrock, Massachusetts Institute of Technology.
2. *Factors to Be Considered When Measuring Free Oil in Food Products*, Dr. L. E. Hoag, American Can Co.
3. *Moisture-Equilibrium Test* (round-robin progress report), C. M. Woodcock, General Foods Corp.
4. *New Information on the Packaging of Meat*, Dr. C. Olin Ball, Rutgers University.
5. *Sterilization by Cathode Rays and Its Relation to Packaging*, Dr. B. E. Proctor, Massachusetts Institute of Technology.

9:00 a.m.—Package Printing
(Concurrent session) East Ballroom
E. H. Balkema, Colgate-Palmolive-Peet Co., chairman.

1. *Proposed Alkali Test for Printed Packaging Materials*, Albin H. Twardowicz, Lord Baltimore Press.
2. *Proposed Method of Testing Packaging Materials for Fastness to Light by Use of the Fadeometer*, George Cramer, Sinclair & Valentine Co.
3. *Proposed Test for Product Resistance of Ink on Packaging Materials*, L. K. Burnett, Ohio Boxboard Co.
4. *Statistical Quality Evaluation of Paper at the Buyer's Level*, Donald Macaulay, Donald Macaulay, Inc.
5. *The Evaluation of Test Methods for Predicting the Scuff Resistance of Printed Packaging Materials*, Maurine Ponder, Joseph E. Seagram & Sons, Inc.
6. *Color Control in Printing Production*, F. L. Wurzburg, Jr., International Printing Ink Co.

(*Luncheon recess*)

2:00 p.m.—Package Printing
(Concurrent Session—continued) East Ballroom
Discussion of papers delivered at morning session.

2:00 p.m.—Drug & Pharmaceutical Seminar
(Concurrent Session—continued) West Ballroom
Dr. John C. Bird, Lederle Laboratories, chairman.

1. *The Washington Scene in Pharmaceutical Packaging Materials*, E. F. Bertrand, Assistant Administrator, Defense Production Administration.
2. *Current Status of Materials for the Pharmaceutical Industry.* (Speaker to be announced.)
3. *Actual Experiences With the DO System*, D. L. Yocum and M. Dresden, Wirz Co., Inc.
4. *Survey and Exhibits of Parenteral Products Packaging*, L. Zahn, Ciba Pharmaceutical Co.
5. *Beautiful vs. Successful Package Design*, Albert Kner, Container Corp. of America.

6:00 to 8:00 p.m.—Social Hour (cocktails) East Ballroom

Wednesday, October 24

9:00 a.m.—Line Production of Packages
(Concurrent Session) Grand Ballroom

1. Seminar on *Specification Requirements for Efficient Packaging-Line Operations.* H. F. Brownell, McKesson & Robbins, Inc., chairman, with a panel including Kenneth Newman, Joseph Burnett & Co. (glass); C. B. Burnside, Eli Lilly & Co. (closures); E. H. Balkema, Colgate-Palmolive-Peet Co. (folding cartons); Maurine Ponder, Joseph E. Seagram & Sons, Inc. (labels), and Ed Worden, Container Laboratories, Inc. (corrugated containers).
2. *Equipment Requirements for Automatic and Semi-Automatic Fluid Lines*, E. R. Hamm, Sharp & Dohme, Inc. (A. M. Iacono, E. R. Squibb & Sons, chairman.)

9:00 a.m.—Petroleum Packaging Seminar
(Concurrent Session) West Ballroom
R. Chester Reed, The Texas Co., chairman.

1. *Progress Report.* Mr. Reed, assisted by A. D. Murphy, Esso Standard Oil Co.; F. N. Landon, Sun Oil Co.; Glen Whetzell, Standard Oil Co. of Indiana; F. J. Beck, Cities Service Oil Co.; G. B. Nelson, Shell Oil Co., and W. J. Wood, Atlantic Refining Co.
2. *Statistical Quality Control Methods Applied to Can Filling Operations*, Robert Mellon, Gulf Oil Corp.
3. *Sub-Surface Drum Filling*, Fred W. Langner, Socony-Vacuum Oil Co., Inc.

12:30 p.m.—Luncheon Grand Ballroom
Reports on committee work.

2:00 p.m.—Line Production of Packages
(Concurrent Session—continued) Grand Ballroom
Seminar on *Packaging-Line Problems*, maintenance, operating lines for most efficient production, packaging-room organization, layout of packaging lines and procurement of equipment. John A. Warren, American Home Products, Inc., chairman, assisted by W. T. Schommer, General Mills, Inc. (food carton lines); R. Ross Kitchen, Charles H. Phillips Division (drug carton lines); J. K. Dotts, Joseph E. Seagram & Sons, Inc. (glass lines); other speakers on can lines for food, can lines for non-food products and flexible-package lines.

2:00 p.m.—Petroleum Packaging Seminar
(Concurrent Session—continued) West Ballroom

4. Movie—*Manufacturing Process for Metal Drums.*
5. *Petroleum Packaging for the Military.* (Speaker to be announced.)
6. *American Standards: What They Are and How They Are Established*, Cyril Ainsworth, American Standards Assn.

Spice labels with character

Knickerbocker Mills Co., a firm that has been merchandising spices since 1842, undertook a redesign of its 1-lb. container for ground black pepper when the company decided to reach the institutional grocery market rather than to continue concentrating on bulk packaging for the manufacturing consumer. To do so, a more appealing package was needed. The redesigned package, printed with a background color of flaming orange and with copy in black and reverse white, does just this and, at the same time, retains a basic resemblance to the old design. The Knickerbocker figure has been kept, but interest has been added by illustrating him on a wharf—a barrel and crate on one side and a clipper ship on the other. A gathering of spices and leaves flanks the frame of the trademark. The date of the company's founding—1842—is prominently displayed on the package.

CREDITS: *Design, Frank J. Lieberman, Woodstock, Vt. Labels, Lane Press, Burlington, Vt. Containers, Corrington Products Co., division of Shoup-Owens, Inc., Hoboken, N. J.*

Design lift wins new sales and new markets

What improved package design can do for the sale of a staple item is currently being demonstrated by the White King soap company which reports that the newly designed wrap for its Sierra Pine toilet soap has helped "win increased sales in all of Sierra Pine's regular markets and also is opening up new outlets." The new wrapper retains the well-established design elements of the old by use of an intensified hue of the former basic color scheme and by strengthening its pine-tree symbolism. Significant are the "all-around display features" given the new wrap and the change in direction of the design from vertical to horizontal to fit in better with modern retail shelf display. The all-over green forest pattern and repetition of the white-lettered brand name assure instant recognition of the soap no matter how it is stacked or displayed.

CREDITS: *Design, Walter Landor & Associates, San Francisco. Wrappers, Western Lithograph Co., Los Angeles.*

HISTORIES

Ivory blue becomes a family hue

Increasing importance of display is indicated by Procter & Gamble Co.'s redesigns for Ivory Flakes and Ivory Snow packages. By changing the background color of the packages to a lighter, brighter blue known as "Ivory Blue"—the same hue used on Ivory Soap wraps—the company has achieved a stronger family tie up. Surface design of both packages has also been changed. A snowman has been added to the front panel of the Ivory Snow box, the brand name has been enlarged and all promotional copy now appears in the mound of snow at the bottom of the front panel. On the Ivory Flakes packages, the three diagonal bands that encircled the old package have been completely eliminated. In their place is a white scalloped oblong block, obliquely placed on the front panel, bearing the Ivory Flakes name in blue. Sales message at the bottom is in reverse white script.

CREDITS: *Design, Gordon Aymar, New York. Cartons, Gardner Board & Carton Co., Middletown, Ohio; Fibreboard Products, Inc., Los Angeles; Container Corp. of America, Chicago.*

Three gift appeals for three Glenmore brands

Glenmore Distilleries Co., Louisville, Ky., will concentrate on a holiday line-up of three distinctive new gift packages to capture the 1951 Christmas trade.

The "Little Colonel" package shows the familiar whimsical trade character ringing Christmas bells.

The Kentucky Tavern Treasure Island decanter carries out the "Treasure-Island" theme.

The Old Thompson ribbon gift package is complete with corsage and greeting-card design.

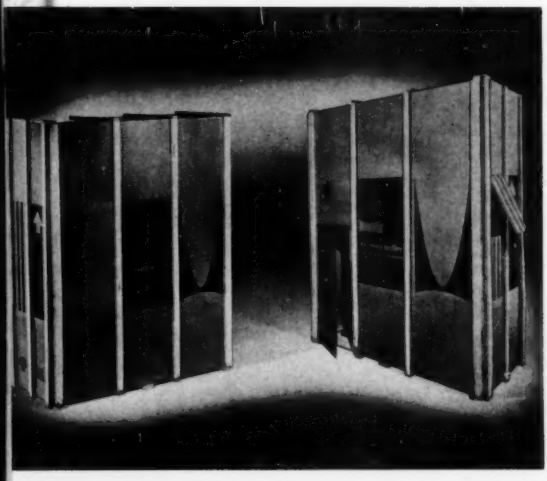
CREDITS: ***Little Colonel**—Bottles, Owens-Illinois Glass Co., Toledo, Ohio, and Thatcher Glass Mfg. Co., Elmira, N. Y. Labels, Consolidated Lithographing Co., Brooklyn. Carton, American Coating Mills, Div. of Owens-Illinois. Design, Gus Jenssen, Chicago. **Old Thompson**—Bottles, Owens-Illinois and Anchor-Hocking Glass Corp., Lancaster, Ohio. Labels, Consolidated Lithographing Co. and U. S. Printing & Lithograph Co., Cincinnati, Ohio. Carton, American Coating Mills. **Kentucky Tavern**—Bottles, Owens-Illinois Glass Co. Label, Consolidated Lithographing Co., Carton, The Bradley & Gilbert Co., Louisville, Ky.*

Elsie's in frozen food business

Elsie, the Borden cow, is now prominently pictured on all packages in the new line of consumer-pack frozen foods introduced recently throughout New Jersey by M. Augenblick & Bro. of Newark, the produce division of the Borden Co. and one of the oldest distributors of retail-pack frozen foods. The Borden Co. has organized Borden's Frozen Foods, Inc., to handle procurement and sales. Labels, featuring full-color artwork of each of the products, were designed for strong appetite appeal. Heavy emphasis is given to product identity by the use of large white letters on a bright red oval. Fruit and vegetable packages have wax overwraps. Two-piece cartons are used for cut-up chicken. Initial items offered under the Borden name include French fried potatoes, leaf spinach, chopped spinach, peas, cut green beans, French cut green beans, strawberries and cut-up chicken.

CREDITS: *Wax overwraps, Marathon Corp., Menasha, Wis. Two-piece cartons, American Coating Mills, Div. of Owens-Illinois Glass Co., Toledo. Design, Edward G. Jacobsson, New York.*

Shipping case becomes a child's playhouse



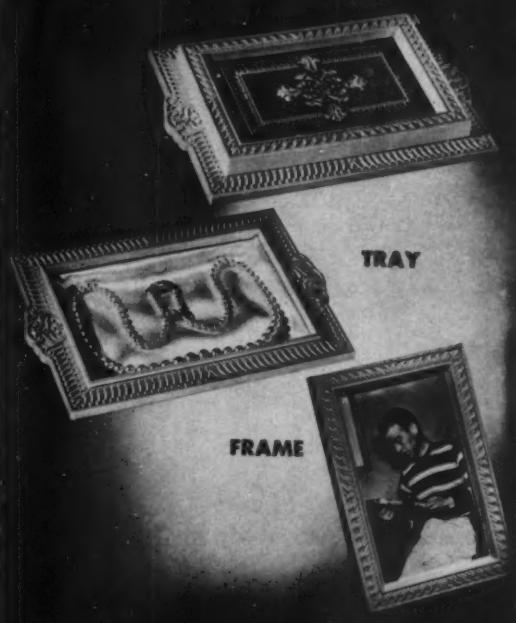
A clever new re-use idea for shipping containers is the case that can be converted into a child's playhouse, recently adopted by the Herman Miller Furniture Co., Zeeland, Mich., for shipping desks and storage units. The shipping cases, designed by the designer of the furniture, are constructed of corrugated board and wood. The board is printed in a colorful red and black design featuring the Miller name. After the furniture has been removed all that has to be done to convert the container into a playhouse is to renail the carton to the bottom wood skid, cut open with a knife or scissors a door, a window and several awnings that are printed on the container. Directions for making the container into a playhouse are printed on a sheet of paper pasted to each carton. Shown is case ready for shipment (left) and as a playhouse.

CREDITS: *Design, Charles Eames, Venice, Calif. Shipping case supplied by Utility Crate Co. and printed by Longview Fibre Co., both of Los Angeles, Calif.*

HISTORIES

Plastic box has double re-use life

A polystyrene plastic box molded in two sections—tray and cover—is being used by L. Heller & Co. for merchandising its Deltah pearls. The appeal of this package is its versatility, since it truly "leads a double re-use life." The box is molded of opaque ivory-colored polystyrene. The bottom portion is fitted with a satin insert on which the string of pearls rests. This section, either with the satin insert left in place or removed, becomes an attractive dressing-table tray. The cover portion of the box has an embossed insert in the center which is easily removable. With the insert removed, the outer decorative rim becomes a picture frame, complete with easel. The upper photograph shows the box complete. In the center is the bottom section of the box serving as a tray. The lower illustration shows the cover of the box, with insert removed, serving as a frame for a photograph.



CREDITS: *Molded plastic box made by Arrow Mfg. Co., Inc., West New York, N. J., using polystyrene supplied by Koppers Co., Inc., Pittsburgh, Pa.*

Colorful bread bags bring business, reduce returns

Sales are reported to have increased 300% in the past three years as a result of the colorful glassine bags used by Albini's Bakery, Los Angeles, for packaging various kinds of bread. The company feels that its investment in the artwork and color printing plates necessary to produce these impressive bread bags is well justified. Business picked up immediately, according to the company records, when Albini French Bread, first of the products to be packaged in these temptingly illustrated bags showing the loaf in four colors, reached the market. Gradually all 11 of the Albini breads were packaged in individually designed bags, similar in general pattern and quality to the French bread bag. These distinctive packages have also resulted in building up brand-name prestige for the company. In addition to the sales power, these colorful glassine bags have cut down the number of stale returns substantially.

CREDIT: *Bags, Milprint, Inc., Milwaukee, Wis.*

GOODMAN'S EVEN BETTER

THE LATEST IN A SERIES OF REDESIGNS GIVES NOODLE FIRM'S PACKAGE A CLEAN-CUT, PERKY PERSONALITY, FULL OF SELLING PUNCH

An ardent exponent of the theory that package design and structure can always be improved, A. Goodman & Sons, Inc., Long Island City, N.Y., has practiced what it preaches by restyling its packages almost every year. The fact that this company has been in flourishing existence since 1865 lends weight to its argument.

This year the changes stress revisions in surface design; in years past the alterations have been in package form and/or design as were deemed necessary to meet the different needs of consumers and merchandising and production demands.*

At present the Goodman line represents some 30 to 40 items. In addition to a wide variety of noodle, macaroni and spaghetti products, the company also makes matzos, matzo meal and dehydrated soups. Some of these products are bulk packaged in 10-lb. boxes; some in smaller printed consumer-sized cartons and some in overwrapped cartons. Noodles, for example, are packaged in 10-lb. cartons as well as in 8-, 10-, 12- and 16-oz. printed cartons.

To provide a critical examination of this range of products and their packages, Goodman's has organized a permanent packaging committee composed of the president, general manager, sales manager and production manager. These executives met regularly during the past year with representatives from the company's advertising agency and long-time carton supplier to plan this latest packaging redesign.

The committee first made a comprehensive examination of all the existing Goodman packages and those of competing brands. This brought out some design weaknesses of its own packages as well as those of its competitors.

It was found that in the existing Goodman designs the lettering of the name in the trademark—which also contained an illustration of a sheaf of wheat in the background—was not as easy to read as it might

* See *Modern Packaging Encyclopedia*, 1951, p. 50.

A CLEANED-UP trademark, brighter colors with more white space and a front position for the Noodleman ad character feature the newest Goodman design.

be and that in the packaging as a whole there was a lack of emphasis on any one design element. The strength of the trademark, the words "Pure Egg" and the product name were about equal. Because of the ink color (a dark royal blue shade) and its solid coverage, there was a definite impression of darkness, if not dullness; hence, the packages needed a lift from the color standpoint in order to highlight them on the shelves of a grocery store. There were other faults on other panels—type too small for the housewife to read easily, failure to identify the product on all panels, etc.

As such weaknesses were listed and analyzed, concrete suggestions for improvement were presented by members of the committee and the restyling, in general, became largely a problem of incorporating these items of improvement.

Since Goodman's principal distribution is through its own truck routes to chain and independent stores, a close salesman-retailer relationship has been built up. For this reason it was decided that the first redesign ideas should be tested with groups of the salesmen who might be extra-sensitive to some of the subtleties of style trends in packages. During these tests the packaging committee studied the reactions reported by the sales personnel and modifications of the design were instituted as a result.

The trademark has now been revised in its diamond-shaped box (with new, stronger type and elimination of the sheaf of wheat) to give it greater readability, but without such drastic changes that regular customers will fail to recognize it immediately. The position on the box remains exactly the same.

The key feature of the new design is the incorporation of the Goodman "Noodleman" as a dominating element on the front panel. For several years the Noodleman has been a feature of the company's advertising, so that he has become a familiar figure, yet illustrations of this pert, jolly chef with his starched cap set jauntily on the back of his head appeared only on the sides of the old packages. By moving him to the front of the new cartons a closer tie-in with advertising is achieved. He adds an informal, "warm" element to the carton, the basic design of which is largely functional.

The slogan "Goodman's for goodness" has been brought to the display panel and linked with the name in the trademark through the addition of a small red-colored rectangle cutting into the lower right edge of the trademark box. The Noodleman's pointer leads the eye to this slogan.
(*This article continued on page 183*)

PHOTOS COURTESY ROBERT GAIR CO., INC.

COMPARISON of front and back panels, old and new, shows improvements. Strengthened trademark is made more legible by elimination of sheaf of wheat and is neatly tied in with slogan, pointed to by Noodleman. Side and back have been made lighter, cleaner and easier to read.

Personally attested

NAME INSTEAD OF A NUMBER INSPIRES GREATER WORKER PRIDE AS J & J ADOPTS NEW CODE MARKING FOR SURGICAL-SPONGE PACKAGES

Through a relatively simple and inexpensive modification of packaging procedure at its Chicago plant, Johnson & Johnson recently eliminated a major bottleneck in the packaging of surgical-gauze sponges, permitting operators to devote more time to important quality-control work.

In connection with this changeover, provisions were also made to include upon each package the actual name of the worker responsible for its inspection and handling instead of an anonymous code number—an interesting new approach in stimulating worker pride and morale. The new program, first tested on a small scale to determine its possibilities, has been so successful that it has now been applied to the entire surgical-sponge department and may later be adopted for the packaging of additional J & J products, both in Chicago and at the company's home plant in New Brunswick, N. J.

The department producing the surgical sponges at the Chicago plant includes 10 "stations," each having two automatic machines which cut, fold and eject the finished sponges ready for packaging. The production units are arranged so that the output of each pair of machines converges toward a central point, so that one operator can package the output of both without changing her location.

In addition to packaging, the primary duties of each operator relate to quality control; she must keep a close watch on the operation of both machines and make certain that the sponges meet critical inspection standards. Any time which can be saved on the packaging operation itself enables the operator to do a more complete job on quality control.

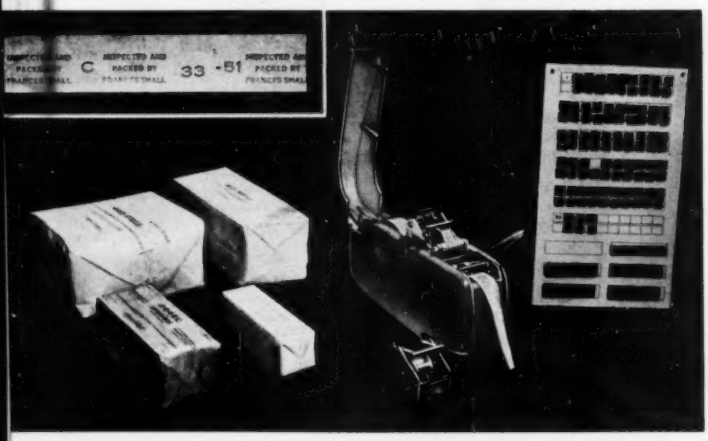
The packaging operation is relatively simple. As the completed sponges emerge from the machines, they are automatically directed into a U-shaped tray or channel, tapered at the outer end so that the operator can slip a gusseted bag over it and push the required number of units into the package. Making the proper count is facilitated by the fact that the machine flips up each 25th sponge slightly above the others. The operator then folds the top of the bag and seals it with a strip of gummed tape, after which the bags are placed in corrugated shipping containers.

These sponges are not sterilized, but removed from the packages as required and sterilized at the hospital just prior to use.

As a record for quality control, each package must carry the plant of origin, the identity of the operator and the week and year of production. Because of the number of machines and operators involved and the necessity for frequent date changes, it is not practicable from the inventory standpoint to have this information preprinted on the packages by the bag supplier. The former practice was to apply it by means of a rubber stamp prior to filling. Operators would take a stack of the bags, fan them out flat on the working surface and stamp each bag separately. However, the company was not entirely satisfied with this phase of the operation and began investigating ways to improve the procedure.

It was pointed out that with rubber stamping some of the bags received only a weak printed impression, or were skipped entirely. Furthermore, the printed words often became blurred or illegible because of the fact that the bags rubbed together before the ink had dried. But the most startling disclosure, as verified by actual time studies, was the fact that the stamping operation consumed a total of 33 hrs. per week, based on three-shift operation of the 10 production and packaging stations.

In checking upon a way to eliminate this bottleneck and avoid some of the disadvantages of the earlier procedure, J & J operating men conducted preliminary tests with a small



MECHANICS of marking system and some finished, end-taped packages. Tape dispenser is shown open with marking unit in place and another unit close-up in foreground. At right is plastic plate on which rubber printing strips with pressure-sensitive backing are kept in order when not in use. Inset: a sample of tape, printed with operator's name and code numbers ("C" for Chicago plant; "33-51" for 33rd week of 1951).

rotary printing device which automatically prints directly upon the gummed tape each time the operator trips the lever of the tape-dispensing machine. This unit consists essentially of a metal roller to which strips of rubber with embossed type are applied. The strips are held in place by means of a permanently tacky adhesive on the back and may be removed and replaced many times without requiring additional adhesive. As the tape dispenser is operated, the printing roller revolves and prints the information directly upon each strip of tape before it is ejected. The compact device, which clips into the dispenser in a matter of seconds and in no way interferes with its normal operation, has an inking pad which keeps the type matter supplied with quick-drying ink for a sharp impression.

Tests by Johnson & Johnson soon indicated that the hours formerly spent in stamping bags could be turned to more important quality-control activities. Then a refinement was suggested which further increased the value of the revised procedure. It was pointed out that if each printed strip carried the name of the operator, rather than the code designation formerly used, each worker would take greater personal interest in the job and greater pride in the part she played in producing the sponges. The application of the tape would, in effect, amount to placing her personal "stamp of approval" upon each package.

Following preliminary tests which verified this conclusion, J & J officials authorized the change and directed that all the tape-dispensing units used in the surgical-sponge department of the Chicago plant be provided with the printing attachments.

Three types of sponges are made in this department—Zobec, Gauze and Ray-Tec, the latter having a dark barium sulphate thread woven through it which can be detected by X-ray. Also, packages are made in several sizes to accommodate a range of sponge dimensions. Brown tape is used in sealing the Zobec sponges and white for the Gauze and Ray-Tec types. Several of the packaging stations are equipped with two tape dispensers so that the operator has both types of tape immediately available.

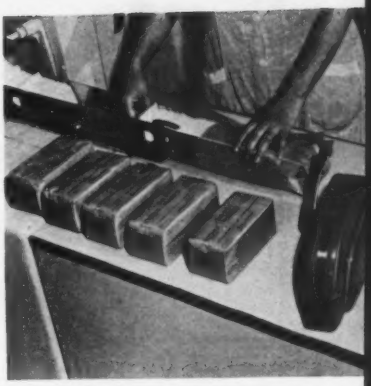
Mechanics of the coding operation are relatively simple. Since there are 30 operators handling the machines and the packaging on the various shifts, each operator is provided with two sets of rubber type strips carrying the notation, "Inspected and Packed by —— ——," together with the letter "C" for Chicago and the figure "51" for the year. There are also two sets of figures from 1 to 52, representing the weeks of the year, in numerical order. These come on small separate strips of rubber and are changed at the beginning of each week's operations.

When an operator comes on duty she removes the printing attachment from the dispensers at her station and equips them with her own name-strip, then snaps the unit back in the tape machine. Then she is ready to begin uninterrupted operations. All the printing strips for each packing station are adhered to a printed panel of clear plastic material having the required number of numbered spaces to keep all the type strips in exact order and immediately available. One of these supply boards is kept at each packing station.

Adoption of the revised packaging procedure—which would be equally applicable to many types of packaging operations where frequent label changes are required—has won the enthusiastic acceptance of J & J officials. Not only has it given the operators additional time to take care of their principal assignment—maintenance of quality control—but it has also served to inspire still greater pride in their work and made them feel a greater personal interest in holding quality at top levels. The customer also reacts favorably to the special attention and care implied by the fact that the packer has placed her own "signature" on the package. In an age of mass production, the J & J personalized label serves as a refreshing reminder that each package, and the products within it, are the responsibility of a human being and not of a machine.

Printing attachments of the type used by J & J for this program are available in a variety of sizes to handle different widths of tape. Their cost is moderate—approximately $25 or less per unit—and they are designed for easy installation on most standard types of tape-dispensers.

CREDITS: *Printed bags for surgical sponges, Wortendyke Mfg. Co., Richmond, Va. Tape dispensers, Nashua Package Sealing Co., Nashua, N. H. Ad-O-Matic printing attachments, Travers & Co., Boston.*



BAGGING of gauze sponges is performed manually as operator slips the gusseted bag over the end of the discharge channel.

AFTER FOLDING end of bag, operator presses lever to get the precise length of tape, which is printed as it is discharged.

SEAL IS MADE by applying length of tape across the folded ends of the package. One operator attends to two machines.

Coffee
HOTTLES
HOTTLES

1

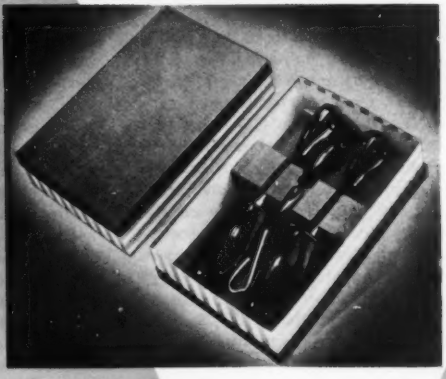
MUSSELMAN'S
APPLE
CIDER
VINEGAR

2

Cream Cans

3

4



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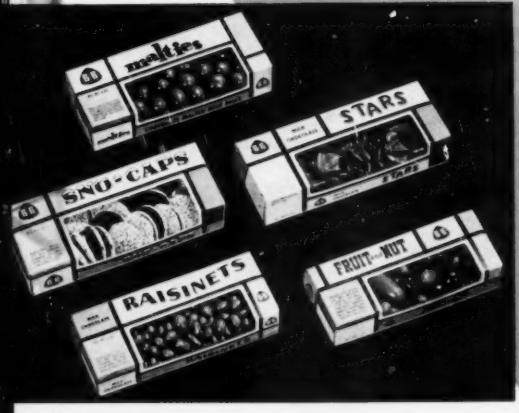
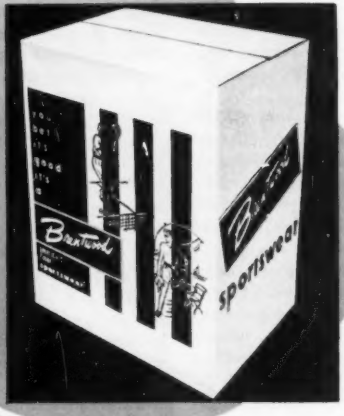

malties
STARS
SNO-CAPS
RAISINETS
FRUIT and NUT

6


Bantam
sportswear

7 8 9

Mrs. Grass
Egg NOODLES

CAL-PRO

PACKAGING PAGEANT

10

11

1 The gift package for McKee Glass Co.'s Hottle—a cup-sized bottle for serving individual portions of hot beverages—provides protection necessary for shipping glass. An interior die-cut platform holds two Hottles and two glass stoppers firmly without any glass-to-glass contact. The display carton illustrates and describes uses of the product. Carton, Cleveland Cartons, division of Robert Gair Co., Inc., New York.

2 Musselman's Apple Cider Vinegar is now being packaged in a re-use container that doubles as a refrigerator bottle for juices and other liquids after the vinegar has been used. Its compact, square shape is a space saver on store shelves and in home refrigerators. Bottle, Owens-Illinois Glass Co., Toledo. Closure, Phoenix Metal Cap Co., Chicago. Label, Piedmont Label Co., Inc., Bedford, Va.

3 A novel "under sea" setting for a string of Lady Ellen "Ocean Gem" pearls is created by this transparent acetate plastic container strikingly printed with bright tropical fish, coral reefs and the trade name. Pearls, attached to the lid at two points, drape gracefully down into the container. Package, Samuel Barnett Co., Philadelphia, using Monsanto's Vuepak acetate.

4 Self-dispensing polyethylene bottles for the "His" line of men's toiletries marketed by The House for Men, Inc., are burgundy colored with labels and foil-lined urea closures in gold. The items are sold individually or in "duo sets" in window-style folding cartons. Bottles (Millsplastic) Elmer E. Mills Corp., Chicago. Cartons, Edison Folding Carton Div., Gaul & Ingalls, Inc., Chicago. Closures, Formold Plastics, Inc., Chicago.

5 Shoe trees, usually a strictly utilitarian item, are being boosted for Christmas sale by the Rochester Shoe Tree Co., Inc., in this gift package. A colorful white and silver striped set-up box with bright red cover contains shoe trees and shoe horn. The boxes form effective displays for windows or counters. Box, M. Bernhard Corp., Rochester, N. Y.

6 The large variety of items in Blumenthal Bros.' line of confections is brought into family resemblance by package redesign. Strong black rectangles give balance and symmetry to the packages. Logotype for trade names varies with each product. Cartons, Edwin J. Schoettle Co., Philadelphia. Design, Howard Alber, Philadelphia.

7 Tests made by the Brentwood Sportswear Co., indicating the effectiveness of colorfully printed shipping containers as a promotional aid, prompted the company to adopt them for its sportswear products. The corrugated box features a yellow background with black and red overprinting. Container, Stone Container Corp., Chicago.

8 Appetite appeal has been added to the cellophane package for Mrs. Grass' Genuine Egg Noodles with a realistic reproduction of a tasty noodle dish rotogravure printed on the package in five colors. Tests indicated that the new package has high visibility, important for impulse-purchase items. Package, Milprint, Inc., Milwaukee.

9 Printed acetate film covering the top of crates in which honey dew melons are shipped to New York by the California Produce Co. provides packer identification at the retail-store level and adds a prestige look which facilitates consumer acceptance of this premium-priced product. Despite coast-to-coast train shipment, the product covered with amber-colored film arrives in excellent condition. Printed film covering, Western Package Products Co., Los Angeles, using Celanese Lumarith film.

10 The modernized label for Polar brand frozen foods, now marketed by Cedergreen Frozen Pack Corp., Bellingham, Wash., provides an attention-getting package with its sparkling white background, brand name in blue, product identification in red and natural-color illustration. Overwraps, Western Waxed Paper Co., Div. of Crown Zellerbach Corp., Los Angeles. Cartons, Marathon Corp., Menasha, Wis., and Fibreboard Products, Inc., San Francisco.

11 Royalist Regent cigars are now being marketed in a five-pack "Lock Pouch" and promoted on the package as "Triple wrapped—Thermo sealed." Individual cigars are sealed in film; the pouch of five is sealed and the 50s display carton is also wrapped and sealed. Pouches, Milprint, Inc., Milwaukee. Display container supplied by Paper & Corrugated Specialties Co. and printed by Majestic Press, both of Philadelphia.

PRODUCT NAME is emphasized in the family label design for rapid shelf identification. Products are packaged in quantities most called for in prescriptions so that pharmacists need not repackage, but merely add their prescription labels.

Ethical identity

BOBST PHARMACAL DESIGNS ITS PACKAGES FOR DRUGGISTS' CONVENIENCE AND FOR CONTINUED BRAND-NAME IDENTITY ON PRESCRIPTIONS

Nearly 80% of the prescription orders dispensed by pharmacists today use products compounded and originally packaged by the pharmaceutical manufacturer. It therefore behooves these manufacturers to consider the convenience features of their packages especially from the standpoint of the pharmacist.

Drug manufacturers have a golden opportunity to see that their drugs, brand and product names are carried right into the home if the original packages are designed so that the druggist has no cause to repackage other than the addition of his prescription label. The package may be designed so that this label is truly an addition and not a replacement.

This has been one of the aims of drug manufacturers for years to promote brand names on which millions of dollars and years of research on packaging developments have been spent to maintain product purity and efficiency. It also helps to eliminate the wasteful practice involved in repackaging, usually in unbranded, less efficient units, by the pharmacist.

The package design of a new line of ethical drug products introduced recently by Bobst Pharmacal Co., Inc., New York, demonstrates some of the techniques that may be used to achieve these points.

The Bobst company specializes in supplying preparations used in geriatric medicine—one of the newer fields of preventive medicine having specific concern with the problems of aging.

At present the Bobst line consists of six products, all of which are in either tablet or capsule form. Four products are packaged in round, amber-colored glass bottles, one appears

in a folding carton and the sixth is put in a set-up box with a gold-colored cover paper which makes it one of the most elegant drug-product packages on the market.

The company worked along two lines in planning packages to meet pharmacists' needs: (1) quantity of contents and (2) label arrangement.

Working with a panel of physicians even through the phase of product development that involved packaging, Bobst, first of all, determined suitable quantities of each product that should go into individual packages, taking into consideration dosage and the period of time that a supply should last from the patient's standpoint. The reason for this is obvious —to avoid, as far as possible, making the druggist split packages to fill prescriptions.

This determination of quantity also permits Bobst to supply the pharmacist with factory-sealed packages which he can, in turn, pass on to the customer who is thus reassured of the product's purity and potency.

All the Bobst products are packaged in counts of 100 except "Vimone" which is packaged in 50s. For added protection, the Vimone and "Gelazyme" tablets are unit packaged in combination cellophane-foil strips. Thus, physicians may supply several sample tablets to patients and patients may tuck a day's supply in their pockets or purses in a convenient package form.

Having provided packages that can go unopened from the pharmacist to the customer in so far as content quantity is concerned, the next problem was to label the packages so that druggists could merely add their prescription labels.

The paper labels for bottles are designed to cover only half the bottle's circumference, thereby leaving ample space for the addition of a prescription label without removal of the original label. Removal is also deterred by the fact that the original paper label does not peel off easily.

On the Vimone set-up boxes and the Gelazyme cartons, wrap-around, band-type paper labels and partial cellophane overwraps are used. The labels are put around the long dimension of the packages; the cellophane overwrap around the width, like a sleeve, leaving the ends exposed. The druggist may slide the cellophane to one end to add his label on one of the package sides or he may remove both the wrap and the band-type wrap-around label entirely. In the latter case, the label itself is easily slipped off since adhesive is used only on the bottom where the label overlap is made.

Product and company name are printed on the sections of the label that go around the ends, with the color scheme reversed so that the boxes and cartons are readily identifiable when stocked end out—a particular convenience for druggists whose shelf space is limited.

A family type of label design is used so that as other products are added, the basic package design may be maintained. In this design treatment, the color scheme is green and gray.

From the consumer standpoint—if the original packages are delivered to customers—the label design and colors are planned to convey the feeling of dignity and quality that will inspire confidence in this line of drug products.

The product names are emphasized throughout the label designs by means of a distinctively styled, rectangular-shaped color patch in which the name is printed. This patch which appears on the cartons and boxes in the upper left corner has bracket-like ends that are outlined with a narrow white border for contrast to the gray color of the background. The Bobst trademark, name and address are printed in reverse on a color border along the bottom of the bottle label and in green ink on a white stripe just above the border on the carton and box label. This arrangement leaves the greater portion of the display panel open for listing the ingredients, dosage and other necessary explanatory copy which is printed in green inks.

There is one variation in the label color scheme. Vimone tablets are compounded in two forms, one with an androgen hormone for male patients and the other with an estrogen hormone for female patients. To help the druggist distinguish between these two different sets quickly, a deep burgundy red color is substituted for the green on the label of Vimone with estrogen.

Trade reaction to the packages is being watched carefully by the company, it is reported, to find out how they are accepted by the practicing pharmacist.

CREDITS: *Label design, Design Unlimited, New York. Labels, Ramapo River Printing Co., Inc., New York. Unit packaging, Ivers-Lee Co., Newark, N. J.*

DETACHABLE band-type, wrap-around labels on boxed and cartoned items have product information printed on their end sections for convenience. Partial overwraps of cellophane are also used to protect the labels from scuffing and to prevent accidental band breakage during shipping. Color-scheme variation for labels distinguishes two forms of Vimone.

Finest Film for Laminations

—because it assures a positive heat seal! —makes a stronger package!

PACKAGING soup mixes, dry powders, hand lotion or granular products requiring hygroscopic, moistureproof, airtight protection? PLIOFILM gives you these practical laminating advantages:

It's thin, lightweight, laminates easily with foil, paper or other films.

It affords a positive "welded" heat seal, making possible a moistureproof, gasproof package. Combined with foil or other film, it provides a package that is ideal for either vacuum or gas-flushed packages.

It's strong and rugged, highly resistant to tearing, splitting or flexing.

In short, many of the same qualities that have made PLIOFILM a standout success in meat, cheese and produce packaging, make it ideal for laminations, too. Write for complete information. Address: Goodyear, Pliofilm Dept., Akron 16, Ohio.

Pliofilm, a rubber hydrochloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

Good things are better in

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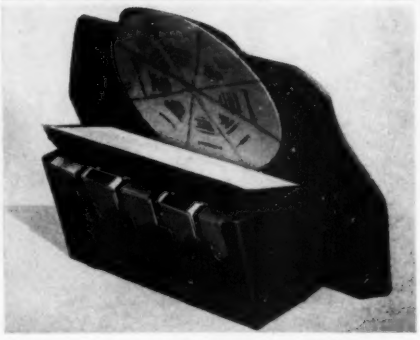
3-way protection against air, moisture, liquids

DISPLAY

HAVE YOU THE NEEDED PRESCRIPTION ACCESSORIES?
Before, During and After Illness
the Fever Thermometer is the
Important Prescription Accessory



Sick-room accessories needed with a customer's prescription are suggested quickly by this "Doctor's Bag" display that presents Becton, Dickinson & Co.'s thermometers under a plastic dome. Embossed and gold-leaf stamped on 250-pt. stock, the display is specially constructed to accommodate 2½ doz. thermometers in the back for convenient dispensing. Display, Consolidated Lithographing Corp., Brooklyn, N. Y.

Canada Dry is promoting combination sales of its Sparkling Water with related foods such as crackers, cheeses and canape items by means of this lithographed corrugated model house dimensional display, open at the top and filled with foods for home entertainment. The unit ties in with the company's *Life* magazine ad featuring the "Open House Treats."

Swatches of Stroock woolens in new fall fashion colors are attached to this easel display card presenting Soaring Red—one of the new Peggy Sage nail-polish and lipstick shades that ties in with fabrics in Stroock's Flying Colors fall collection. Both lipstick case and bottle quill are fitted with attention-getting red plastic "wings" lettered in white.

Realistic wild game reproductions lithographed against an outdoor background set the stage for the House of Crosby Square's fall shoe line. The three-unit display, which gives the feeling of flight and motion and of third dimension, may be used in windows, on counters or for floor display, separately or as a group. Display, Milprint, Inc., Milwaukee, Wis.

GALLERY

Small retail outlets are provided with a miniature candy department when using Sperry Candy Co.'s new 48-bar display carton for Sperry's cellophane-wrapped Nut Roll assortment. Letterpress printed in three colors, the 9 by 18 in. carton sets up easily and fits neatly on the counter or candy display rack. Display carton and printed cellophane bar wraps, Milprint, Inc., Milwaukee, Wis.

A compact counter display carton is used to introduce the new Dial Deodorant Shampoo by Armour & Co., makers of Dial deodorant soap. The shampoo is packaged in a green polyethylene spray bottle with a coral styrene screw-type closure. Back piece carries a reproduction of the soap package to tie it in with the shampoo. Design, Robert Sidney Dickens & Associates, Chicago. Carton, Container Corp. of America, Chicago. Bottles, plugs and caps, Plax Corp., Hartford, Conn., and Elmer E. Mills Corp., Chicago.

A touch of humor is added to the theme, "Make it clear . . . make it Schaefer" with this trio of small display cards promoting Schaefer Pale Dry Beer: a yodeling Alpinist atop a mountain, the customer leisurely enjoying his beer on a cake of ice and the organ grinder with his monkey. All three of the cards, which may be used together or separately, are lithographed in full color. Display, Einson-Freeman Co., Inc., Long Island City, N. Y.

Schenley's new three-dimensional motion display illustrates movie stars Cesar Romero, Robert Preston, Herbert Marshall and Claude Rains going in and out of a revolving door which turns by means of a heat motor in the center. The door is opaque except for the figures, which are illuminated by the bulb of the heat motor. Sidewalk, canopy and door are in full dimension. The unit measures 39 by 40 in., is lithographed in eight colors. Display, Wesco Associates, Inc., New York.

Air Force looks to industry

NEW INTEGRATED PACKAGING PROGRAM IS BASED UPON MAXIMUM USE OF SUPPLIERS' OWN FACILITIES AND KNOW-HOW

The nation's packaging capacity and know-how is going to be utilized fully for packaging and preserving millions of items used in the far-flung supply system of the expanding United States Air Force.

This is the word from Headquarters Air Materiel Command, Wright-Patterson Air Force Base, following a Supply Packaging Seminar which was attended by packaging technicians from all of AMC's areas in the United States. Participating in the conference, headed by the chief of the Packaging Office of AMC's Supply Division, were the chief of the newly formed Command Packaging Office and the chief of Packaging Section, Office of Deputy Chief of Staff, Materiel, Headquarters, USAF, Washington.

In a move designed to save manpower, money and materials, the Air Force aims to take advantage of industry's trained personnel, packaging facilities and packaging knowledge gained during World War II. Industry will be called upon to package a maximum amount of USAF material for export and long-term storage and use its engineering capabilities to produce adequate packaging standards.

Packaging is an integral part of the USAF's world-wide supply system from the time a supply item starts on the engineering drawing board to its final use in battle. The Supply Division must protect USAF supplies and equipment against deterioration and physical damage regardless of climatic conditions or any other conditions experienced by USAF in distributing supplies throughout the world. This means that more than one million different items in the USAF supply system must be delivered to the right place and at the right time —efficiently and economically—in condition to be used immediately.

The Air Force points out that prior to World War II industry did not have experience to prepare it adequately for the demands of war time export shipment and long-time storage. Consequently, it did not have the necessary knowledge, manpower or equipment with which to do the job. USAF at that time was forced to initiate research into methods, techniques and materials and, at the same time, assume in the depots a tremendous job of repackaging material.

Included among the supply items which the Air Force repackaged, during World War II, were electric motors, generators, inverters and

EXPLANATION of the new packaging policy, affecting millions of Air Force supply items, is given to Supply Packaging Seminar at Wright-Patterson Air Force base by Lt. Col. R. W. Johnson, chief of the Packaging Office, Supply Division, AMC.

many delicate instruments. The nature of such items, which cannot be coated with an ordinary corrosion preventive, requires a dehydration (Method II) preservation and packaging method.

A typical example of the World War II packaging problems which the Supply Division worked out was the establishment of standard unit-package quantities for USAF supply items and the development of corrosion control to preserve supplies under all kinds of climatic conditions. Standardization of unit-package quantities is commonly known as the Weight and Cubage Program.

Today the situation is much different. Industry employs thousands of persons in comparable packaging activities and millions of dollars have been spent on packaging research, materials and equipment. For the USAF to retain its policy of World War II would constitute a duplication of effort and, to that extent, a gross waste of the nation's resources.

As part of the new program to take advantage of industry's capacity and know-how, AMC has established a central packaging office to exercise complete technical supervision over all packaging activities within the command and to maintain and enforce USAF packaging standards.

The new central office is the Command Packaging Office, under the Deputy for the Commanding General for Operations. It will provide technical assistance to other USAF commands, establish and maintain liaison with all AMC field activities, initiate action necessary to insure a continual improvement of USAF packaging techniques and coordinate all phases of AMC's packaging mission.

To further centralize AMC's packaging activities, a packaging control office is being organized within the Supply Division. Included among its responsibilities will be:

1. Determination of packaging requirements for USAF.

2. Formation and dispatch of packaging teams to contractors' plants to assist manufacturers in USAF work.

3. Determination of the effectiveness of USAF packaging and the adequacy of existing instructions through analysis of reports of unsatisfactory or damaged shipments.

4. Inspection of AMC installations to insure compliance with directives and packaging policy.

5. Performance of those functions which will provide the centralized coordinated technical direction needed and desired by AMC field activities.

Once these organizational adjustments have been made effective, it is proposed to apply the same methods to the packaging organization of the AMC field installations. It is believed that the USAF then will be in a position to secure maximum utilization of methods, techniques and materials.

The first step to use industry's capacity is a study under way to determine the possibility of greater utilization of commercial-type containers for packaging USAF supply items. The study aims toward economy and improved packaging techniques.

The study will be conducted at various USAF depots. Included in it will be analyses of the costs of packaging and preserving supplies under present USAF methods and of packaging and preserving with the use of commercial-type containers. It will cover sanitary cans, friction-top cans, pails and drums up to 60-gal. size.

One of the first changes effected as a result of the study is in the method of shipping plywood in bundles, up to 2,000 lbs., consisting of any quantity of sheets held together by a metal strapping ¾ in. wide and 0.023 in. thick. Three straps will encircle the bundle horizontally and two vertically.

In addition to standardization of unit-package quantities, the Weight and Cubage Program also prescribes the method of preservation required for packaging an item in a standard-sized unit package and determines the weight, cubage and dimensions of a standard unit package. The data are being compiled in a new publication, "USAF Unit Package, Weight and Cubage Data." This program is about 80% completed and is being carried out with the cooperation of industry.

It enables the Supply Division to prescribe adequate unit packages for all active USAF supply items, thus preventing utilization of over-sized containers and improper preservation. It assures deliveries of supplies from manufacturers in suitable unit quantities and containers of standard size, shape and type, thereby effecting more efficient receiving, storing and issuing operations at USAF depots throughout the United States. It speeds the taking of inventories and helps economize storage space.

Previously, a supply item shipped

COMMERCIAL CONTAINERS will be used where possible for Air Force clothing and equipage items, Col. Rudolph Fink tells seminar personnel.

by several manufacturers was received in different types of containers of various sizes, shapes and weights. This made it difficult for warehousing personnel to handle its huge volume of daily orders and wasted critical storage space.

Specifically, the USAF standard unit package which a manufacturer must use when the program gets in full swing is the initial or basic package containing a single item or multiples of such item and the method of packaging required for preservation. A standard unit package must be of specified cubage, dimension and weight. Dimensions apply to outside measurements. In a small percentage of the items, a standard unit package will include the weight of the shipping container.

For example, under the Weight and Cubage Program, a manufacturer supplying a certain metal bracket for an engine is required to unit package it as follows: 24 brackets per unit package, with each bracket coated with a corrosion-preventive compound and wrapped in acid-free, greaseproof paper. Each unit package must be 1 in. in length, 1 in. in width and 3 in. in depth (outside dimensions), weigh 9 oz. and have a volume of 0.01 cu. ft.

The Weight and Cubage Program does not include exterior container requirements.

Weight and cubage covers approximately 400,000 active USAF supply items. Standard unit packages already have been established for about 300,000 items, or about 80% of the total. Among classes exempted are such items as lumber, sheet metal, printing forms and training film.

There will be a separate USAF Unit Package, Weight and Cubage Data catalog for each class of USAF supply items, except those exempted. Each catalog will reflect the standard unit-package quantities for each item, method of preservation, weight, cubage and dimensions. Thirty of approximately 125 catalogs, covering about 50,000 items, already have been published.

The Supply Division recently adopted a new preservation, packaging and packing policy for a long list of Air Force supply items.

The new policy is designed to speed up delivery of overseas shipments and minimize handling at USAF supply depots. Under the policy, manufacturers selling to USAF are required to package specified quantities of supplies in containers designed for overseas shipment.

Previously, manufacturers and USAF depots were required to pack for overseas shipment only quantities of items anticipated or known to be destined for overseas. Consequently, the corrosion-control, packaging and packing branches at USAF supply installations were taxed to the limit to keep exports on a current basis.

In order to alleviate this condition and insure adequate supply support to the USAF, the Supply Division has adopted a policy whereby a required amount of specified items, spares and parts to be purchased will be packaged by the manufacturer in containers meeting specifications for overseas shipment, storage and handling. In addition, where USAF consumption warrants, the percentage of items packed for oversea shipment will be increased to a point consistent with anticipated requirements.

Each section of the Supply Division determines the appropriate percentage of common items, such as commercial hardware, personal clothing, caps, footwear, etc., which manufacturers are required to pack in overseas containers.

The Supply Division places much emphasis on the selection of the right preservative to assure that supplies are delivered in usable condition. The choice of preservative depends upon a number of factors, including the composition of the part to be preserved, nature and function of the part's service, complexity of construction, degree of preservation required, other functions required of the preservative, packing to be used over the preservative, ease or necessity for removal, availability of material and difficulties of application.

Except for the few items that require no corrosion control, a manufacturer is requested to preserve each item he supplies to the Air Force under one of the following three methods:

1. Corrosion-preventive compound coating for such items as bolts, braces, cables, chains and hand tools.
2. Corrosion-preventive compound coating, plus waterproof unit package, for such items as bolts, gears and valves.
3. Dehydration packaging for such items as machine guns, electric motors, fire-control instruments and precision instruments, using a water-vaporproof container plus a drying agent.

Included in the aeronautical items, spares and parts which come under the Supply Division's packaging policy are aircraft components, aircraft engines, accessories, spare parts, aircraft armament, bearings, airborne and ground-installation types of communications equipment and spare parts, ground-handling equipment and special tools.

SIMPLIFICATION studies produced this proposed new method for packaging airfoils, suspending airfoil in shipping container from same points used to attach it to aircraft, eliminating cushioning, blocking and bracing. Models are displayed by K. E. Plymate, packaging technician at San Bernardino Air Materiel Area Depot.

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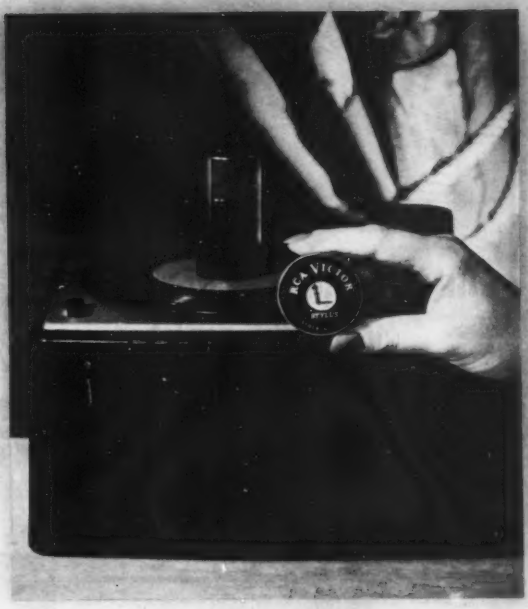

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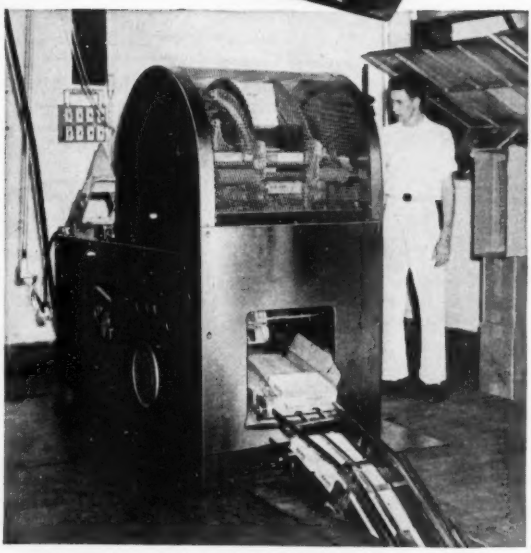

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Design factors in blow-molded plastic bottles — I

WHAT THE USER SHOULD KNOW IN MAKING A CHOICE OF PACKAGE FORMS IN THIS RAPIDLY DEVELOPING NEW ART.

By J. H. Parliman*

Insufficient detailed information on plastic bottle design is available in the literature for the designer. This is somewhat surprising in view of the present wide use of the package. Probably the most significant information on blow-molding thermoplastics was published in 1945 by James Bailey (1).[1] There have been other articles dealing with polyethylene and its use in packaging.

The art of blowing plastic bottles and of decorating and sealing them has advanced so rapidly during the last five years that any attempt to set down in writing firm points on design has been difficult and this probably explains the comparative lack of design data. Even though the advances are continuing at a seemingly advanced rate, there are some phases of design which can be brought to the attention of engineers and designers of the plastic bottle package at this time.

Many of the shapes and details of plastic bottles used in the past have been patterned after glass bottles. This was natural in view of the long history of glassmaking and large volume production of the glass industry. However, the properties of plastics differ greatly from those of glass. Therefore, it is also a natural trend that plastic bottle designs have begun to deviate widely from conventional glass bottle design. This is important and is to be encouraged. The field of plastic bottle design is wide open and imagination should be the keyword.

The various design factors discussed in this article relate mainly to polyethylene, although for the most part the same principles may be used for other plastic resins. At this time practically all bottles being used are blown from polyethylene. However, a bottle designer should not lose sight of the fact that other plastic materials have been used and many other materials could probably be used if the right end use warranted development.

Materials other than polyethylene suitable for bottle blow-molding are discussed below:

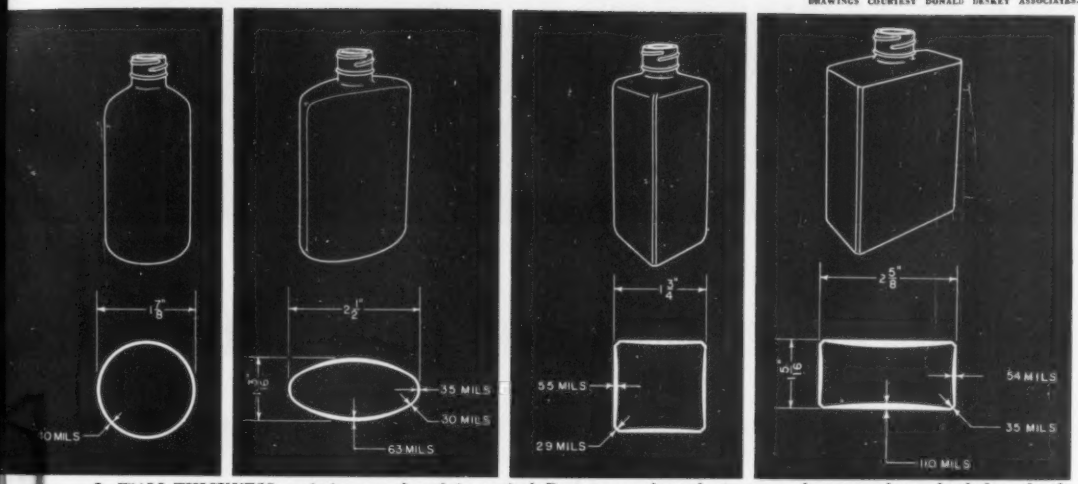
Cellulose acetate generally pro-

1. STANDARD TYPES of polyethylene blow-molded bottles, including (held in hands) a range of sizes from a 10-ml. cosmetic vial to a 32-oz. acid bottle. The latter is now being molded in sizes up to 2 gal.

* Technical Service Manager, Plax Corp., Hartford, Conn.

[1] Numbers in parentheses identify References appended.

DRAWINGS COURTESY DONALD DEAKEY ASSOCIATES.



2. WALL-THICKNESS variations as found in typical Boston round, oval, square and rectangular polyethylene bottles. All are of comparable weight and capacity. Wall thicknesses indicated were measured midway between shoulder and bottom.

duces rigid bottles, although thin walls and certain shapes give reasonable flexibility. It can be produced in water-clear, transparent shades, or in opaque colors. Acetate bottles are now used for lubricating-oil samples and millions of acetate Christmas balls and toys have been blown. The material is practically unbreakable. It is not suitable for packaging water or alcohol-base liquids, but is excellent for aliphatic hydrocarbons such as kerosene and cigarette-lighter fluid.

Cellulose acetate butyrate is similar to cellulose acetate, but produces somewhat tougher bottles. Lubricating-oil sample bottles are used. Also 16-oz. bottles (containing water) are used on a gummed-paper-tape dispenser machine. It is not suitable for long storage of water-base liquids.

Polystyrene bottles are light weight, rigid and have good clarity. However, common formulations break fairly easily. Annealing may be necessary for certain shapes and uses. Polystyrene bottles were used in large numbers during World War II for military air shipment of drugs. Also, they have been used commercially for a special nasal-spray dispenser package.

Styrene-isobutylene copolymer bottles have been successfully blown. The raw material is not commercially available at the present time. Bottles are essentially rigid, although they can be flexed slightly. They are good barriers for water-base liquids. These bottles should have interesting properties where normal gas permeation is of importance. The polymers have never been commercially used for bottles.

Polyisobutylene-polyethylene mixtures have been successfully blow molded. The resulting bottles are very similar in feel and appearance to polyethylene bottles, but have somewhat less strength and slower recovery when used as spray bottles. The bottles bulge more easily under internal pressure and collapse more easily under vacuum. Permeation properties are better than those of polyethylene for some liquids, worse for others. Polyisobutylene has been considered as an extender for polyethylene (2). These mixtures warrant careful examination for special end uses.

Other materials which are candidates for commercial bottles include ethyl cellulose, nylon, the various vinyl chloride base materials and trifluorochloroethylene polymers.

It should be evident from a study of the above brief outline that more thought should be given to materials other than polyethylene for blow-molded bottles. The field has yet to be exploited by designers and packaging engineers.

Polyethylene properties and uses

A review of the more important properties and commercial end uses of polyethylene bottles may be helpful to this discussion, even though information of a similar nature has been widely published during the last five years (3, 4, 5, 6, 7).

Excellent chemical inertness is one of the most important polyethylene properties. It has no known solvents at room temperature, although it is swelled to a certain extent by some chemicals, including chlorinated hydrocarbons. There are a number of solvents at elevated temperatures. A very few chemicals will seriously impair its physical properties, including fuming nitric acid and liquid bromine.

The mechanical properties of polyethylene result in blown bottles which are tough and flexible. If bottles are blown with sufficient wall thickness, they are then semirigid. Fatigue life of the bottles is high and they may be flexed many thousand times with no ill effects. As a matter of fact, packages which require 500 to 1,000 squeezes to dispense the product are common. It is important to note that recovery after squeezing is rapid.

Polyethylene bottles may be used over a wide *temperature range*. Recent tests have proved that blown polyethylene bottles filled with water do not break or crack when thrown on a concrete surface after freezing solid for several hours at minus 65 deg. F. While the bottles lose strength as the temperature is raised, they may be boiled in water without ill effects under certain conditions. They deform easily under loading at

this temperature, but do not melt and the temperature does not adversely affect the polyethylene itself. However, it is not recommended that polyethylene bottle packages be submitted for any great length of time to temperatures above 165 deg. F. Polyethylene definitely will not withstand autoclave sterilization.

Polyethylene bottles may be used for the packaging of a wide range of products, but the *rate of permeation* of liquids and gases varies widely, depending on many variables including the size of the permeating molecules and their polarity. Fortunately, water and alcohols have low permeation rates and the large number of products having these bases can usually be successfully packaged. Among the liquids not recommended for packaging in polyethylene are kerosene, carbon tetrachloride, turpentine, cigarette-lighter fluid and diethyl ether. Routine permeability testing is always recommended.

Other properties important in the use of polyethylene bottles are light weight (they float on water), chemical purity (no plasticizers or additives are used), lack of odor or taste and warm, pleasant "feel" of the material.

The more important end uses of polyethylene bottles may be divided into four categories:

Chemicals: 48% hydrofluoric acid, sulphuric acid (battery electrolyte and for spraying on pine trees), 30% unstabilized hydrogen peroxide, mercury, buffer agents (nitrates and silicates), rust removers containing hydrofluoric acid, various pastes and liquids containing fluorides.

Cosmetics: Liquid and cream deodorants, face and hand lotions, shampoos, toilet waters and colognes, after-shave lotions, bath powders, hair preparations, soaps and detergent solutions, sun-tan lotions, baby oils and powders.

Pharmaceuticals: Nasal sprays, special detergents, foot powders, animal medicines, concentrated mouth washes, calamine lotion, copper sulphate solution.

Miscellaneous: Household deodorant and germicide sprays, window cleaners, windshield anti-freeze sprays, insect-repellent sprays, candy flavors and colors, graphite, mimeograph machine inks.

Capacities and dimensions

Commercial polyethylene bottles are now blown with capacity ranging from 10 ml. (⅓ oz.) to about 1,000 ml. (32 oz., measured to overflow), plus 1- and 2-gal. sizes recently developed. The corresponding weight range varies from 3¾ to 110 gm. for the 32-oz. size. Bottle weights may be blown with tolerances of less than ±2% to ±4% or greater depending on the particular circumstances involved. For instance, bottles having weights of less than 10 gm. usually are blown to ±¼ gm., while a 32-oz. bottle may require ±5 gm. weight tolerance.

Fig. 1 illustrates the size comparison of a ⅛-oz. cosmetic vial and a 32-oz. acid bottle. Also shown are various available stock bottle designs.

It should be remembered that the above weights are for polyethylene, the lightest of the commercial plastic materials (specific gravity 0.92). Bottles made from most other materials would be heavier for a corresponding design and wall thickness. Cellulose acetate, as an example, has a specific gravity roughly 30% higher than that of polyethylene.

Most bottles have been blown with diameters from ¾ to 3¾ in. and heights from 2 to 9 in.

No attempt will be made in this article to discuss in detail the actual blowing process, nor the many blowing variables which affect the finished bottle. However, there are a number of considerations, directly resulting from the blowing techniques and limitations, which the designer must heed if his design is to be blowable.

The ideal bottle shape from a production and engineering viewpoint is cylindrical. The very common Boston round bottle is a good example. The parison is round in shape and, when blown into a round bottle, excellent wall distribution results. When a square bottle is blown, the flat side walls (closest to the initial parison) tend to be thick when compared to the corners (farther from the parison). Likewise, oval or rectangular bottles tend to have greater wall thicknesses on the "long" side than on the "short" side.

Fig. 2 illustrates typical wall variations for round, oval, square and rectangular polyethylene bottles. Wall thicknesses of actual bottles are given, measured with a micrometer about half way between the shoulder and bottom. Bottles were cut in half, parallel to the bases, in order to make the measurements. For purposes of illustration, round and oval bottles of about the same weight and capacity were used. Square and rectangular bottles were similarly selected. Actual weights and capacities of the four bottles shown in Fig. 2 are given below:

Shape	*Weight in gm.*	*Capacity to overflow in ml.*
Round	17.0	138
Oval	18.4	148
Rectangular	27.9	175
Square	24.4	205

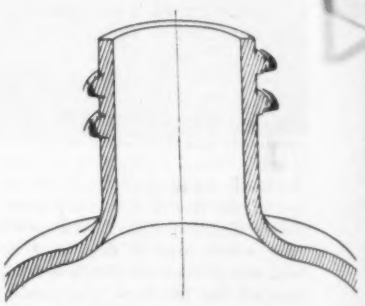
As might be expected from examination of Fig. 2, there is a practical upper limit to the blowable ratio of bottle length to bottle thickness. Whenever possible this ratio should be held down to 2:1. The oval and rectangular bottles in Fig. 2 have length-to-thickness ratios of roughly 2.0:1. However, this ratio may be exceeded with correspondingly thinner walls resulting. Bottles are on the market with ratios of 2.3:1 or 2.4:1.

Sharp corners and shoulders can be blown, but should be avoided if possible. It is more difficult to "fill out" these places and the tendency for thin wall areas is greater.

Both tall, slender and short "fat" bottles give difficulties in blowing.

Designs with severe undercuts are apt to be difficult to blow.

Many designs which are classified as "difficult" or "tricky" can be blown successfully under special conditions and specifications. Increasing the weight of the bottle will allow many shapes to be blown which are difficult or impossible in lighter weights. But greater weights mean more material and longer blowing cycles, both of



3. THREADS of conventional glass-bottle design (shown with diagonal hatching in this cross-section) are compared with new buttress type (in color) designed for polyethylene bottles.

which increase costs. In some instances, merely lengthening the blowing cycle will allow a design to be blown. Aside from these factors, "difficult" shapes may involve more skilled machine operators and more inspection—plus a greater rejection rate.

Therefore, while it is usually possible to determine definitely whether or not a new design can or cannot be blown, it is not always quite so obvious as to just what may happen to final costs on the blowable but "tricky" designs. Thus, the bottle designer has, in many instances, considerable responsibility as to the final production costs of a blow-molded polyethylene bottle package.

Neck design

Speaking generally, manufacture is facilitated if the design provides a bead around the neck, below the bottom of the thread. The bead may also be recessed and called an undercut. If an undercut is used, a heavier neck wall thickness may be necessary.

When spray plugs are to be inserted in the neck of a bottle for "squeeze-bottle" spray applications, the bottle necks must be specially designed.

The plugs will expand the neck (threads) of a bottle an appreciable amount, since the plug diameter is necessarily larger than the inside diameter of the neck. The actual amount of friction fit will vary with the particular neck and plug in question, but the plug diameter is typically about 0.015 in. larger than the neck I.D. It is this friction fit that expands the thread diameters. Different mold inserts for the neck must be used when a mold is to produce bottles used both with and without spray plugs.

The distance from the top of the thread to the extreme top of the neck (usually about 1/32 or 3/64 in.) is commonly called the "S" dimension of a bottle. When a plug is to be used, the bottle top is usually flush with the top of the thread. This compensates for the thickness of the shoulder of the plug, which seats on the top of the neck and prevents the plug from being inserted too far. New plug designs specify that the shoulder thickness be exactly equal to the "S" dimension of the bottle.

Thus a bottle which is to be used with a plug must not only be blown using a special-mold neck insert, but it must have the correct neck inside diameter and "S" dimension.

The great bulk of the plastic bottles have been blown with neck diameters ranging from 18 to 30 mm. However, recently, sizes as small as 15 mm. and as large as 38 mm. have become common.

Enough wall thickness in the neck of a bottle must be maintained to provide neck rigidity for a secure cap fit and seal. The actual thickness used in practice varies greatly with specific design, but 1/16 in. is often used as a design minimum. This wall thickness is controlled by the actual weight of plastic used and by the neck diameter.

The maximum weight of plastic which can be blown will depend on the design itself.

An example of the importance of the neck diameter may illustrate the point. In the development of a special bottle for the Armed Forces, where a fairly rigid, large-neck-diameter, 6-oz. container was required, it was found that a liquid-tight cap seal was difficult to obtain using a 43-mm. neck. However, a 38-mm. neck allowed a greater neck-wall thickness, increased the rigidity of the neck and provided an excellent and successful package.

Bottle threads

Proper thread design is obviously one of the most important factors for bottles which are closed by the use of screw-on closures. Thread designs very similar to those used for glass bottles have been and still are widely used for plastic bottles. The basis for these glass-type thread designs are the GCMI[2] specifications. It was undoubtedly logical to use glass designs at the start. It is just as logical to believe that while such designs will give acceptable results in many cases, the glass designs are *not* the best designs for plastic bottles. Certainly, glass and polyethylene have physical and other properties which are considerably different.

The glass-type threads are round and when they are used on polyethylene bottles the force of the round cap thread against the round neck thread can fairly easily be great enough to deform the plastic bottle thread and cause stripping. However, it should be pointed out that a properly designed, or even a reasonably well designed, round thread gives ample strength for most uses. For instance, recent tests using quart-sized polyethylene bottles with polyethylene caps showed that bottles filled with water (2 lbs.) can be dropped 20 to 25 ft. on a concrete surface, hitting on any portion of the cap or bottle, without causing cap stripping or leakage.

Because of the inherent flexibility of polyethylene and many other plastics, a new thread design of the buttress type, permitting a stronger union of the cap and bottle, has recently been developed[3]. Fig. 3 shows a comparison of the old GCMI thread and the new buttress type. The new thread is a modified V-shape. The driving face is perpendicular to the neck of the bottle, while the back face makes an angle with the neck of the bottle.

In recent tests the force required to push off buttress-threaded caps was 25% greater at 40 and 80 deg. F. than the force required to push off a regular round thread. At 150 deg. F., 34% greater force was required. For the buttress thread, the equivalent calculated shear force for this push-off test is 42% greater at 40 and 80 deg. F. and 51% greater at 150 deg. F. Also the cap-removal torque was less for the buttress thread, resulting in an easier removal of the cap.

In these tests, polyethylene bottles were specially blown, having the same amount of engagement (1¾ turns) in both regular round and new buttress threads. A section was cut out of the bottom of a bottle and a metal washer was placed against the cap liner. With a ball-point rod pushing against the center of this washer, the cap was pushed off, using a Baldwin-Southwark Tate Emery tensile-testing machine. The crosshead was operated at a standard rate of 0.25 in. per minute.

Special caps must be used with the new buttress-type thread. This causes no difficulties for many end uses, where a custom cap would be used anyway. If the buttress thread becomes widely used, cap molders will be able to carry in stock buttress-thread caps just as they now carry round-thread caps.

With the same line of thought as discussed above, it is recommended that no less than one full turn actual engagement between the cap and bottle be used. One and a quarter turns may well be considered a bet-

[2] Glass Container Mfrs. Institute.

[3] By Plax Corp.; called "Plax Buttress Thread." See MODERN PACKAGING, Aug., 1951, p. 120.

ter minimum. One and three-quarters turns has been suggested as a desirable design aim.

Many polyethylene bottles are now blown having threads interrupted for a short distance at the two mold seams. These are bottles having a neck diameter which is small in relation to the weight of the bottle. If any given bottle is blown in a series of smaller and smaller neck diameter sizes, a point will be reached, in the present state of the art, where the neck of the bottle must be specially pinched, with interrupted threads resulting. Tests have shown this thread interruption reduces the thread strength very little.

Collapse

One interesting and, fortunately, comparatively infrequent problem in the use of flexible bottles for the packaging of liquids is caused by the absorption of oxygen in the liquid. This leaves a partial vacuum in the air space above the liquid. When a rigid bottle is involved, no change in the package is apparent. However, with a flexible bottle, the walls of the bottle tend to collapse inwardly. This will have no effect on the liquid, but the appearance of the collapsed bottle may be undesirable.

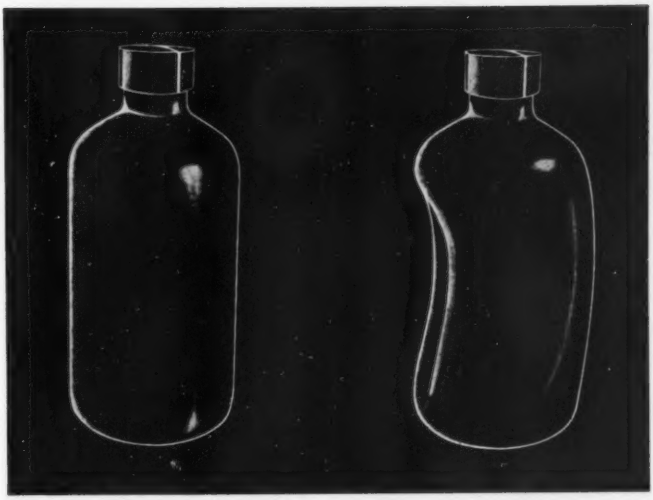
This collapse effect is usually encountered with viscous liquids having very low permeability rates. Thus, the amount of liquid lost by permeation could not figure in the collapse.

Various degrees of collapse take place, depending on the type of bottle and liquid involved. However, the most typical collapse cannot be detected for a matter of several weeks. If collapse is not noted in the first four weeks, it usually will not occur at all.

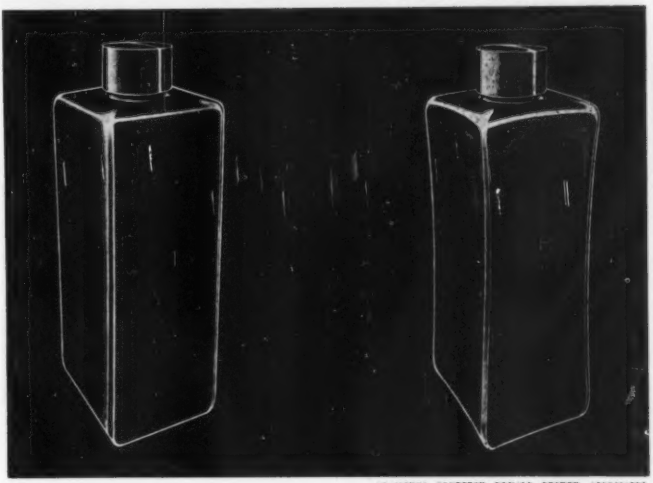
Assuming it is desired to package a "collapsing" liquid in a polyethylene bottle, there are steps which can be taken to solve the problem, once the tendency to collapse has been established:

(1) Fill the package as full as possible. The customary air space required in glass bottles is not necessary with flexible polyethylene bottles (except those designed for squeeze-spraying). This procedure removes most of the oxygen from the package and at the same time fills the bottle with incompressible liquid.

(2) Use bottles having greater side-wall thickness for greater strength.



4. COLLAPSE of bottle walls, a phenomenon which occurs with some polyethylene-bottled products due to absorption of oxygen from air into the liquid enclosed, can be minimized by bottle design. A comparison of bottles before and after long shelf life shows that collapse is far more noticeable in the round shape, shown above, in contrast to the slight deformation of the rectangular bottle which is shown in lower illustration.



DRAWINGS COURTESY DONALD DESKEY ASSOCIATES.

(3) Use the proper bottle design.

It is Step 3 above which principally concerns the bottle designer. Experience has shown that some shapes show collapse more readily than others.

One of the best examples of this class of bottle is the cylindrical Boston round shape. It is this shape which is commonly used to test for collapse. Other shapes greatly hinder collapse. An example of this type of design is a heavy-walled square bottle.

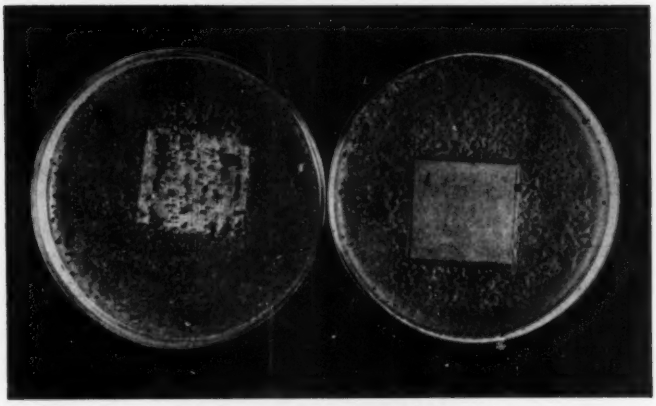
It is obvious that the above recommendations result in packages which often cannot be flexed sufficiently for use as spray bottles. However, they usually have enough flexibility for use in dispensing a viscous liquid. As noted above, collapse is most frequently found with viscous liquids

(*This article continued on page 120*)

Wood preservative

A FUNGICIDE IS FOUND TO LENGTHEN LIFE OF CONTAINERS AND PALLETS WHILE PREVENTING PRODUCT-TAINTING MOLDS.

By Edward D. Horgan*



PROTECTION against surface-growing fungi afforded by Cellu-san treatment is shown by this comparison of two wood specimens identically exposed in Petri dishes to a common mildew culture. The untreated specimen (left) is overrun with mildew; the treated (right), free of attack.

WATER REPELLENCY is illustrated by treated end-grain specimen (right), contrasted with an untreated (left) specimen. Wood which has been treated with Cellu-san is found to reduce moisture pick-up by 75%.

For a number of years there has been an evident need for a safe, odorless, economical treatment for the preservation and protection of wood carriers and containers used for foodstuffs, beverages, soaps and other similar kinds of odor-absorbing materials.

This need is accentuated by the growing scarcity and increasingly higher costs of wood and metal used in the production and maintenance of pallets and containers. In certain industries[1], moreover, it would be especially desirable to guard against spoilage of materials due to absorption of odors from contaminents in the wood and to prevent pallet or container damage caused by loosened nails and bolts.

A treatment that is designed to achieve these practical objectives, therefore, should:

1. Protect wood against micro-organisms responsible for decay, mildew and unsanitary conditions. (Wood embrittlement or loss of resiliency is usually the direct result of mycotic attack. Any treatment having fungistatic action would consequently extend the expected service life of the wood.)

2. Control dimensional changes in wood by minimizing fluctuations in its moisture content. (As wood dries out, it shrinks from nails and bolts, leaving them exposed as hazards to materials and merchandise. In dehydrating, wood may also check or split or warp, which reduces the utility of the pallet by weakening it and militating against its stackability. A preservative treatment which could minimize repair and maintenance expense incurred by either of these two moisture-caused conditions would measurably benefit materials-handling economics.)

3. Impart to wood no color or odor which may be absorbed by stored materials to impair their usableness or salability.

4. Impart to wood no toxic properties which could adversely affect stored materials.

5. Be harmless to persons handling the treated wood or applying the treatment.

6. Be easy to handle and apply.

7. Be long lasting and resist the effects of weathering or constantly high humidity.

The practical objectives and criteria enumerated above served as a guide for research work leading to the development of a new wood treatment that would be specifically engineered to enhance further the inherent advantages of wooden pallets used in storage and warehousing of foods, beverages, soaps and other

* President, Fungitrol Chemicals, Inc., Hillside, N. J.

[1] For example: baking, cold-storage warehousing, milling, sugar refining, beverages, toilet-soap manufacture, etc.

odor- and flavor-sensitive products. Moreover, such a treatment would be valuable also for application to wooden boxes and containers of all types used in the collection, processing or distribution of foodstuffs and beverages.

After re-appraising various recognized and suspected fungicides, we crystallized our research program around a number of formulations of petroleum sulfonate salts.

In the course of a number of years' experience with fungus action, it has become evident that losses in tensile strength reflect other changes in the characteristics of wood. For example, a wood specimen which has lost tensile strength invariably loses flexural stability and on bending will break quite readily. To get a preliminary measure of the fungicidal effectiveness of various compounds being investigated, the Hopkins-Coldwell technique (1)[2] was employed. To determine the permanence of the treatment, some of the test specimens were leached at the rate of 8 liters of water per hour for 24 hours. All strips (birch veneer) were buried in moist soil (2) for 28 days and at the end of this period, residual tensile strengths were determined.

From these determinations it became apparent that a composition of zinc petroleum sulfonate, which was designated as Cellu-san, held the greatest promise for an effective and practicable preservative-fungicide for pallets and other wooden articles in those industries where our objectives and criteria must be met. Results for this new composition may be observed from Table I.

TABLE 1—TESTS OF CELLU-SAN BY HOPKINS-COLDWELL TECHNIQUE

Treatment of wood (1)	Tensile strength retained (average of 20 strips) *Unleached*	*Leached*
Dip in 10% solution*	100%	100%
Dip in 5% solution*	97	99
Untreated	7	9

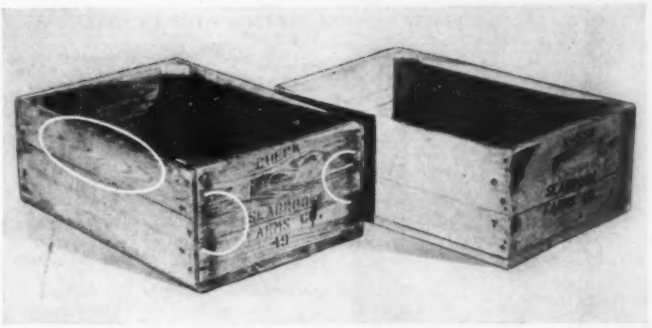
* In this test and in all others reported in this paper, mineral spirits is the diluent used.

These results are believed indicative of the excellent decay resistance imparted to wood treated with the new petroleum sulfonate formulation. In addition, from these data it becomes apparent that for commercial application a 5% solution is adequate.

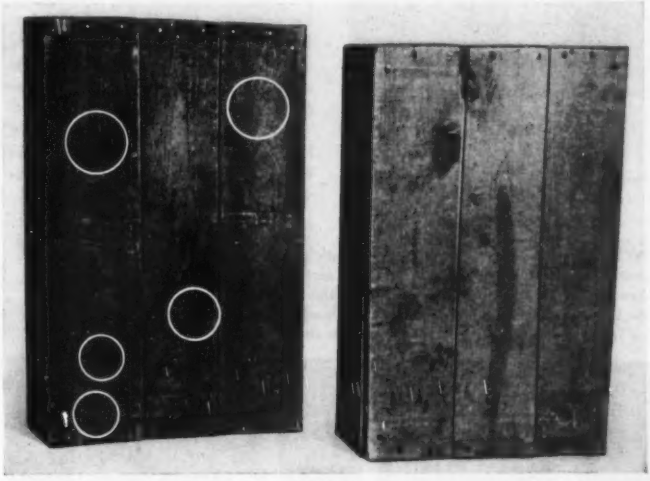
A further measure of the decay resistance of this new wood preservative was provided by the highly accelerated Leutritz method (3). Some Southern yellow pine sapwood blocks were prepared to retain a petroleum sulfonate concentration of 2 lb. per cubic foot, and others to retain 1 lb. per cubic foot. The treated samples lost practically no weight when exposed to the test organisms *Lenzites trabea* and *Poria microspora*. Untreated controls, in contrast, lost approximately one-half their original weight.

The fungus *Trichoderma*, which is frequently found on wood and wood products, was utilized to determine the protection this composition provided against surface mold and mildew. Yellow birch veneers were dipped in a one-to-two dilution of the preservative. They were then dried and placed on a 48-hr. culture of the organism growing on malt agar in a Petri dish. The veneers themselves were inoculated with the fungus and were placed into incubation for seven days. At the end of this period the untreated samples were overrun with mold, while the treated specimens completely resisted fungal attack.

As an additional check on the decay and mildew resistance imparted



CIRCLES SHOW evidence of grain separation and flaking of wood fibres in the untreated field crate illustrated at left, in contrast with the sound condition of a treated crate, similarly exposed, at right.



BOTTOM VIEW of the same field crates in upper photo. Circles indicate evidence of decay and fungi conditions on untreated specimen.

[2] Numbers in parentheses identify References appended.

TABLE II—YELLOW BIRCH VENEERS TREATED WITH 5% CELLU-SAN

	Unleached specimens		
	One week incubation	*Two weeks incubation*	*Three weeks incubation*
Treated	No growth	No growth	No growth
Untreated	Moderate growth	Heavy growth	Heavy growth
	Leached specimens		
	One week incubation	*Two weeks incubation*	*Three weeks incubation*
Treated	No growth	No growth	No growth
Untreated	No growth	Slight growth	Moderate growth
	Weathered specimens		
	One week incubation	*Two weeks incubation*	*Three weeks incubation*
Treated	No growth	No growth	No growth
Untreated	Very slight growth	Moderate growth	Heavy growth

to wood by the new petroleum sulfonate composition, squares of yellow birch veneers were treated with the standard 5% solution and were exposed in a cycled "tropical" chamber where optimum conditions for decay and mildew are maintained.

In this chamber, a relative humidity of approximately 95–100% is maintained. The temperature is cycled between 20 and 30 deg. C. The temperature exceeds 25 and 30 deg. C. for approximately 18 hrs. of the day. Because of the cycled temperature and the high humidity, moisture condensation results, effecting optimum conditions for microbial development.

Some of the specimens were leached and others were weathered for one month on a rooftop in Elizabeth, N.J. Replicates as is, leached and weathered, were then put into the test. Results are tabulated in Table II.

From the results of the *Trichoderma* test and the tropical chamber exposure, it becomes manifest that the petroleum sulfonate composition possesses a high degree of effectiveness against mildew and decay-producing organisms. Moreover, where wood is initially contaminated, this formulation can be expected to inactivate it and thus minimize contamination of materials which may come in prolonged contact with the wood.

Minimizing fluctuations in the moisture content of wood is an important factor in controlling the dimensional stability of pallets and wooden containers. It was, therefore, necessary to investigate the moisture repellency of the new composition. Blocks of yellow pine sapwood measuring 2¾ by 3¾ by 11/16 in. were treated with the standard one-to-two dilution of the wood preservative. Some blocks were leached with water for 24 hrs. at the rate of 39 liters per hr. and others were weathered for one month on a rooftop. All blocks were weighed and then completely immersed in water for varying periods of time. Then they were removed, wiped dry and reweighed. The test results, which are tabulated in Table III, indicate the practical water repellency imparted by the Cellu-san composition.

Where a preservative is to be employed on pallets or containers for handling materials (such as fruit, sugar, flour, scented soaps, etc.) which readily absorb foreign odors, that preservative should possess no odor of its own. To determine the odor characteristics of our new microbicide, we treated a number of yellow pine sapwood blocks with the standard solution. Other blocks were treated with mineral spirits alone. After a preliminary 24-hr. air-drying period, the treated and control blocks were sealed individually in quart jars. Tests conducted 72 hrs. later indicated that the petroleum sulfonate composition does not impart any odor to wood. It should therefore be safe to use on wood which will come in contact with odor-absorbing materials.

In order to be sure of the applicability of the new preservative to wooden articles which must sustain rough handling during their service life, it was necessary to determine the relative performance characteristics

INFECTION OF FOOD from wood fungi is evident in untreated box of grapes illustrated at left in upper picture, while the treated box shows little, if any, growth on either the box or the grapes. Both of the boxes were exposed for seven days under controlled ideal conditions for mildew and decay. The lower picture shows both of the boxes empty.

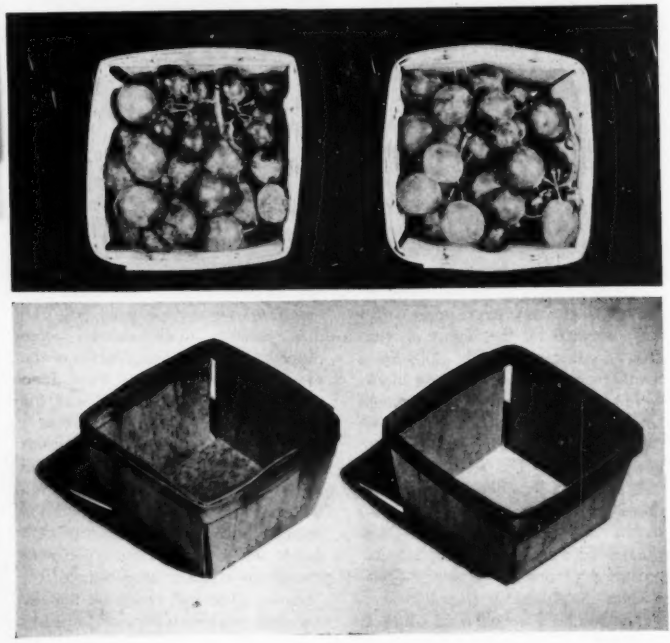


TABLE III—WATER REPELLENCY

Treatment*	% increase in weight due to water pick-up after immersion of				
	15 min.	*30 min.*	*60 min.*	*120 min.*	*240 min.*
Unleached blocks					
Treated	2.2	4.6	5.5	7.2	9.5
Untreated	18.7	22.5	26.9	31.4	35.4
Leached blocks					
Treated	3.6	3.8	4.8	6.6	9.1
Untreated	22.8	27.4	32.5	37.0	40.8
Weathered blocks					
Treated	3.2	5.0	5.8	7.3	9.5
Untreated	20.6	24.1	27.8	32.4	34.9

* Initial moisture content—10% on an oven-dry weight basis. Three-minute dip in 5% solution of the preservative; 24 hr. air-dry.

of treated and untreated wooden articles. For this purpose, an equal number of wooden field picking boxes[2] were chosen at random from a group which had been used for one complete harvesting season at the Bridgeton, N.J., plant of Seabrook Farms, frozen food growers and processors. The boxes were submitted to an independent laboratory (Packaging Service Corp., Wyncote, Pa.), for testing. Field boxes were chosen because they could be easily and economically tested in the laboratory. Moreover, as they are normally subjected to hazards as varied and severe as for any other wooden article used in materials handling, it was believed that the accelerated rough-handling tests would be applicable to pallets and to other containers.

Empty field picking boxes were first tested on a vibrator table which has a mixed motion: a "pitch and toss" in addition to horizontal and vertical vibration. On the table is a "fence" which repeatedly bumps the box, simulating rail or truck transportation. One hour on the vibrator is equal approximately to two weeks (336 hrs.) actual transportation.

The results of this test showed that untreated wood did not retain nails nearly so effectively as treated wood. The ratio of nail failures in the untreated group of boxes exceeded failures in the treated group by 174%.

The boxes were next filled with 60-lb. dummy loads and subjected to drop tests designed to simulate handling hazards encountered in regular usage. From a height of 24 in., the boxes with their 60-lb. dummy loads were dropped in sequence, under controlled conditions as follows:

1. Flatwise on the bottom
2. On the long edge
3. On the medium edge
4. On the short edge

As a result of the drop tests, 60% of the untreated boxes required repair or recoopering before being returned to service. All of the treated boxes retained ample efficiency to remain in service—with but one requiring very slight recoopering. In this test the containers failed through loosening of nails at joints. In addition, several panels were split.

Damaged boxes were repaired and were refilled with the 60-lb. dummy load. Loaded boxes were then placed for 1 hr. on the vibrator table, which operated at 200 RPM with 1-in. strokes to produce an impact of one "G." The results of this test were similar to those of the previous ones.

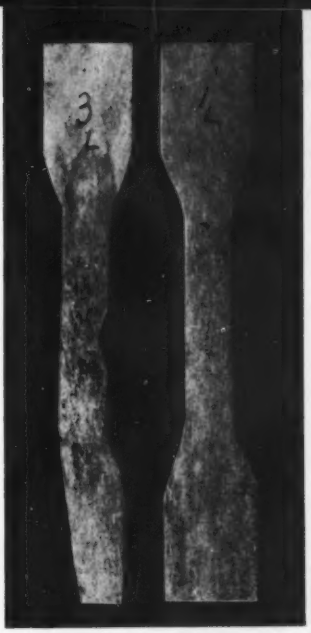
Sixty percent of the untreated boxes were damaged, while 20% of the treated containers showed slight loosening of the nails. In this test, which was designed to simulate several weeks of actual truck transportation, the number of nail failures in the untreated group exceeded failures in the treated group by 1,105%.

Next, the containers were emptied and were then given 25 falls, "gang run" in a 14-ft. drum rotating at 1 RPM. The revolving-drum testing machine combines in a single test practically all the hazards encountered by containers in service. Upon the six internal faces of the drum, hazards are arranged so that, as the drum revolves, boxes will slide, fall and strike on all sides, edges and corners in a manner that simulates the stresses, shock and rough handling encountered in actual use. Inasmuch as the drum rotates slowly, an observer can note the beginning of any failures and trace them until containers become unserviceable.

After 25 falls had been achieved for each of the boxes, 60% of the untreated boxes showed complete failure and were removed from the test. The remainder of the untreated boxes required slight recoopering before being returned to service. At this stage in the series of tests, it became evident that these containers were exhibiting signs of fatigue—loosening of nails, splitting of the wood, shearing of wood parts from nails, etc.

At the completion of this revolving drum test, 80% of the treated boxes remained serviceable. The balance (20%) of the treated boxes could be returned to service with slight recoopering.

The final rough-handling test was the drop test to destruction. Flat drops were made from a height of 30 in., edge drops from 27 in. The boxes, which contained 60-lb. dummy loads, were observed after each fall to determine weaknesses in construction. Only one (20%) of the untreated boxes remained in condition



VENEER SECTIONS photographed after being buried 28 days in specially prepared decay-producing soil. Untreated sample (left) has been severely attacked and has lost almost 100% of its tensile strength; the treated sample has not been affected.

[2] Inside dimensions—21½ in. long, 14⅛ in. wide. 7½ in. deep. Thickness—sides, 7/16 in.; bottom, ⅜ in.; ends, 25/32 in. Triangle corner posts—1⅜ by 1⅜ by 14⅛ in. T&G construction of Southern yellow pine. 6d nails.

to withstand this test. That untreated container went to complete failure in six falls. All of the treated boxes remained serviceable for the test and 80% of them withstood three falls before going to complete failure. One (20%) failed on the second drop.

Conclusions

As can be observed, the foregoing program of laboratory-controlled rough-handling tests was designed to determine which of the two sets of containers would give the best performance, stand up under fatigue and give superior service over a longer period of time. The laboratory's conclusion is as follows:

"Results of each phase of the five tests indicated that the treated boxes withstood fatigue to a much greater degree and were far more efficient mechanical-wise than the untreated boxes and that a much longer service life could be expected from a treated container."

As it was important that this water-repellent fungicide be non-toxic, we asked an independent laboratory to perform a series of ingestion tests in which rabbits were fed extremely large quantities of Cellu-san. None of the test animals suffered any ill effects from the fungicide.

Further practical considerations required that our formulation be non-irritating to persons applying it or to persons handling treated wood. The report of the dermatitis appraisal, performed in accordance with Navy Specification 51-D-6 by an independent laboratory, indicated that the composition is completely safe to handle. Moreover, confirmation of this finding is indicated by the more-than-one-year's actual field testing of our composition.

The formulation has been approved, with the highest rating, by the National Wooden Box Assn. and it is being used by such companies as National Brewing Co., for beer cases; Colgate-Palmolive-Peet, American Sugar Refining Co. and Hathaway Bakeries, for pallets; Canada Dry Ginger Ale Co. and the Pepsi-Cola Co., for beverage cases. H. J. Heinz Co. and Campbell Soup Co., for tomato hampers, and various dairy companies for dairy cases.

Laboratory tests, field-performance reports and experience gained to date with the formulation indicate that this composition is an outstanding wood preservative and fungicide. It is believed suited for the treatment of pallets and wooden containers used in the handling or warehousing of odor- and mildew-sensitive materials, especially in those industries where conditions favor the growth of mildew and decay-producing micro-organisms.

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Design factors in blow-molded plastic bottles

(This article continued from page 115) which could not be sprayed at any rate.

Fig. 4 compares the appearance of cylindrical and square polyethylene bottles in severely collapsed condition with the bottles as they originally appeared. This amount of collapse would normally be found only after many months of shelf life. It will be noted that the round bottle has taken on a very unattractive appearance, but the square one has and will continue to have a good appearance.

Collapse cannot be considered a major problem because of the comparative infrequency with which it is encountered. But when the problem must be faced, it can in a high percentage of cases be satisfactorily solved—principally by proper bottle design. It is interesting to note that one of the most attractive polyethylene packages, on the market for several years, contains a liquid which would start collapse in a round bottle in a matter of two weeks and cause a very poor appearance in less than a month. This package in a modified rectangular shape with raised, flat side panels has given no trouble.

The wide range of colors available for polyethylene bottles is of particular interest to the designers. A large number of opaque and translucent polyethylene colors are now standard. Furthermore, exact color matches are routine in the trade. However, the basic color of the material itself is translucent milky white.

The easy availability of color is a definite advantage, particularly in view of the fact that comparatively short runs can be made in colors and at a small additional cost.

The use of white bottles should always be carefully weighed because of soiling which can occur. White has been successfully used for a number of packages, but has given trouble in others. The final decision will depend on a number of conditions, including the material to be packaged, design of the bottle, method of packaging for shipment, type of distribution.

Many plastic materials other than polyethylene are available in almost any imaginable color, including water clear. Cellulose acetate and polystyrene are examples.

(In Part II of this article, next month, the author will conclude his report with a discussion of closures and liners, plugs and tubing for spray packages, and labeling and decorating.)

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Method II for electric motors

QUESTION: At the present time we are packing a special electric motor in a sealed steel can. This unit is used domestically, but must be packaged to stand long periods in storage. We would like to put this unit in some type of airtight, moistureproof bag in a fibre shipping case. The unit occupies about one cubic foot of space. Do you have any suggestions as to how such a motor could be packaged?

ANSWER: These special motors can be successfully packaged and preserved by what is known as Method II. Method II is the designation for a military packaging type which uses a flexible, heat-sealing, moistureproof barrier with silica gel as a dehydrating agent. The sealed barrier is then placed in a rigid container, such as a wooden box or solid fibre or heavy corrugated shipping case. Method II has been used for the long-time preservation of complex assemblies, including electrical equipment, and has amply demonstrated its ability to give adequate preservation even in long-time tropical storage. There are many different materials and constructions for the moistureproof barrier, the methods of cushioning, as well as the type of outer container. It is suggested that you obtain copies of some of the many military specifications covering this type of packing and particularly MIL-B-131A, AN-B-20 and MIL-E-6060. The specifications listed will also reference other specifications dealing with particular phases of this type of packaging.

Frozen fish fillets in cartons

QUESTION: We would like to know if we can apply a plastic coating to the inner walls of a frozen fish-fillet carton to prevent the fillets from sticking to the walls. At present we are overwrapping the fillets in cellophane, but we would prefer to overwrap the carton and put the fillets directly in the carton if we could find an answer to the problem of sticking.

ANSWER: Frozen fish fillets can be placed in a waxed carton and there is no need for any special plastic formulation. The carton blanks are run through the wax bath to coat them completely and the wax film will prevent the absorption of fish juices and any sticking to the carton. However, wrapping the fillets in cellophane before placing them in the carton has the advantage of reducing the possibility of fish juices coming through and staining the exterior of the carton or being trapped between the carton and cellophane wrapper. However, if the fillets are frozen prior to putting them in the carton, this would not be a serious problem.

Use of soluble packages

QUESTION: We are interested in the possibility of using a dissolving package as featured on p. 88 in the August, 1951, issue of MODERN PACKAGING. The use of such a package would add convenience for the consumer in the use of several of our products.

ANSWER: There are many factors which must be considered in developing a soluble-type package for any product. The most important factor is the solvent which will dissolve the film and release the package contents. If the package is to dissolve in a water solution, then films based upon cellulose, or some of its derivatives, or polyvinyl alcohol should be used. If the solvent is an oil or other organic material, then it will be necessary to try various resinous films that will have solubility in the particular liquid. Another factor which must be considered is the amount of agitation or stirring which may be necessary to dissolve the package under normal temperatures and release the product in dispersible form. It is also possible that the product in the dissolving package will have to be put in an additional envelope or container, since water-soluble films have no moistureproofness and the product might cake or become insoluble after shelf exposure.

It is suggested that you obtain samples of various types of films after informing the film supplier on the characteristics of the products you have in mind and that you use such samples to make up packages and try them with your products for their dissolving action in the way they would be used by the consumer.

Product separation during filling

QUESTION: We are attempting to package a mixture of dehydrated vegetables in cellophane bags and we are having trouble with the mixture separating in the filling unit. The action of the filler causes the large and fine particles to separate, resulting in a lack of uniformity in the filled bag. Can you suggest a filling means that would overcome the segregation of the mixture?

ANSWER: It is a very difficult problem to prevent entirely stratification of different sized particles while a product is being transported to and fed through a bag-filling unit.

One solution would be to separate the product into fine and coarse portions and to use a two-stage filling operation, filling the finer material in one stage and the coarser particles in another to obtain a uniform mixture in the bag. If this is not feasible because of the composition of your product, then it will be necessary for you to develop a special filling head which will uniformly mix the mass immediately prior to its being placed into the bags.

There are many companies specializing in special types of filling machines which would be able to help you on the problem, or develop a special filling head if necessary.

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Pfeiffer Food Products, Inc., did just that. Now bright, attractive "Cel-O-Seal" bands not only catch the food shopper's eye, but also give Pfeiffer's sales slogan outstanding display on an area of the package that would otherwise be wasted. And "Cel-O-Seal" does even more. It inspires the customer's confidence, too. For when shoppers see the neat "Cel-O-Seal" closure, they're assured that care has been taken to protect the contents against tampering and contamination.

Colorful "Cel-O-Seal" bands can do all this for your package, too. They can add eye-appeal, plainly show slogans or sales messages, and stimulate customer confidence in your product.

We'll be glad to work with you to design an outstanding "Cel-O-Seal" band for your package. Just write "Cel-O-Seal" Div., E. I. du Pont de Nemours & Co. (Inc.), 9521-A Nemours Building, Wilmington 98, Del. "Cel-O-Seal" cellulose bands are also sold by Armstrong Cork Co., Lancaster, Pa., and I. F. Schnier Co., San Francisco, Cal.

DU PONT "CEL-O-SEAL" BANDS

DU PONT

REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

Visible Quality in the Package Can Reflect the Invisible Quality of the Product!

Leading Manufacturers of Teas, Spices and Cake Mixes, Recognizing that Fact, Give Preference to...

Ridgelo
CLAY COATED
REG. U.S. PAT. OFF.
BOXBOARDS

FOR FINE FOLDING CARTONS

- SUPERIOR PRINTING SURFACE
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- BRIGHT FAST AND SOIL RESISTANT COLOR
- BRIGHTER — SMOOTHER
- CUSTOM MADE FOR EVERY ORDER
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- HIGHER VARNISH GLOSS

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Representatives

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Norman A. Buist, Los Angeles

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Illustrated

for paint spray protection.

PLUGS to seal off the speedometer hole . . .

•

to plug up an oblong hole on the manifold assembly . . .

•

to slip over the carburetor opening . . .

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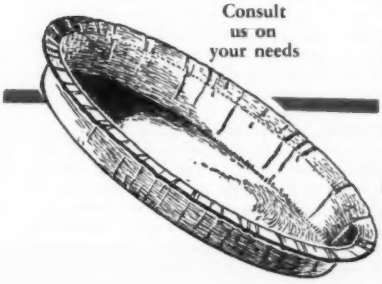
a masking protector on fuel pumps . . .

•

to protect against dust, dirt and lint . . . in storage or in transit to installation.

Consult us on your needs



PLUGS . . . SLEEVES . . . CAPS

Are of Ever Increasing Importance to the Manufacturer.

We design and produce them to meet the most exacting needs.

Our Plugs and Sleeves obtainable in diameters from ⅛ inch up. Caps from ¼ inch up. Special Sizes and Shapes to meet YOUR needs.

* * *

Also available . . . Chemically Treated Plugs with added strength and stiffness . . . with proper resilience to ensure a tight fit.

Grease proof . . . low moisture absorption . . . noninflammable . . . and are stable up to 260° Fahrenheit.

* * *

Attractive Prices . . . Quick Deliveries!

The CLEVELAND CONTAINER Co.

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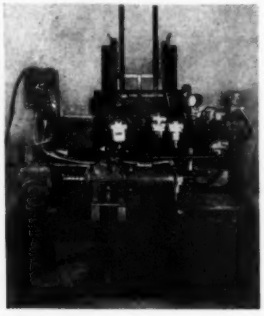
• All-Fibre Cans • Combination Metal and Paper Cans
• Spirally Wound Tubes and Cores for all Purposes

PLANTS AND SALES OFFICES: Cleveland, Detroit, Chicago, Plymouth, Wisc., Jamestown, N. J., Ogdensburg, N. Y. • ABRASIVE DIVISION at Cleveland
SALES OFFICES: Grand Central Terminal Bldg., New York City; Washington Gas Light Bldg., Washington, D. C.; West Hartford, Conn.; Rochester, N. Y.
Cleveland Container Canada, Ltd., Prescott, Ontario • Offices in Toronto and Montreal

Equipment and materials

A NEW ENVELOPE VACUUM SEALER
that automatically vacuumizes and heat seals pre-product-packed plastic film bags for the packaging of poultry, meats, cheese, fish and other film-packed products, has been announced by the Standard-Knapp Division of Emhart Mfg. Co., Portland, Conn. The new EVS-108 machine when used with film that shrinks on application of heat draws the bag tightly around the product whether it is regular or irregular in contour. Handling up to 15 or 18 bags per minute, depending on product size, the unit is said to provide important labor and material savings. The automatic heat-sealing cycle has pre-set controls for type and weight of film used. Spreader bars eliminate wrinkles at the seal line and excess bag material is sheared and automatically ejected following the vacuumizing and sealing cycle. Setting of the spreader bars permits adjustability of plus 3 in. from normal bag size, with a bag-size range of 5 to 18 in. at bag mouth. The machine requires a minimum of floor space, the dimensions being 35 by 36½ by 50 3/16 in.

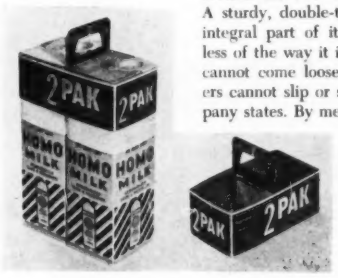
AN ECONOMICAL, VERSATILE NEW PRINTER
that imprints identification marks and trademarks on both sides of long, narrow strip material at the same time is being manufactured by The Associated Machines, Inc., Lancaster, Ohio. One of the machines is now being used by the American Brake Shoe Co. for identifying their brake shoe linings. Sizes of linings that can be imprinted range from 1¾ to 4 in. wide and from a curved section with a radius of 6 up to 18 in. in length. Identifying marks can be printed on any part of the curved surface. The linings are automatically discharged onto a continuous belt at a speed of 60 pieces per minute, regardless of variations in length and width. The Koloprint printer uses no set type; printing is by direct action on the linings with special synthetic faced rubber printing plates. Change of plates is accomplished in a minimum of time. Non-corrosive inks that harden well and do not smear are used with the printer. The printed linings can be packed immediately after they leave the discharge conveyor.



RUST-PREVENTIVE WRAPPING PAPER
developed for protection of heavy machinery and bulky metal parts during storage and shipping has been announced by the Nox-Rust Chemical Corp., 2429 S. Halsted St., Chicago. This new heavy-duty packaging paper is made for Nox-Rust by Glas-Kraft, Inc., Lonsdale, R. I. Called Vapor Wrapper and identified as Nox-Rust No. 120 Glas-Kraft grade, the paper is made of two high-strength kraft sheets cemented together and reinforced with spun glass fibres. The inner ply of kraft is impregnated with Callex, a volatile rust-inhibitor chemical. The paper is said to be tough, resilient and tear resistant, as well as moisture and water repellent.

PREFABRICATED POLYSTYRENE FOAM ELEMENTS
which are pre-cut or pre-grooved according to specifications are being offered for industrial packaging applications by Glo-Brite Products, Inc., 6415 N. California Ave., Chicago 45, Ill. This foam plastic material provides a light-weight, shock-absorbing and protective packaging medium suitable for shipping delicate and precision instruments, ampoules, vials, bottles, etc. The company has designed and manufactured tools and perfected methods to work the material economically for high-speed, mass-production output. Glo-Brite Products points out that fragile items can be sandwiched between two pieces of the foam plastic and with the addition of a corrugated cover the item is completely protected for shipment. The material does not absorb moisture, has excellent flotation properties and its cellular nature makes it a good low-temperature insulation material which acts to protect liquid components from freezing, according to the company.

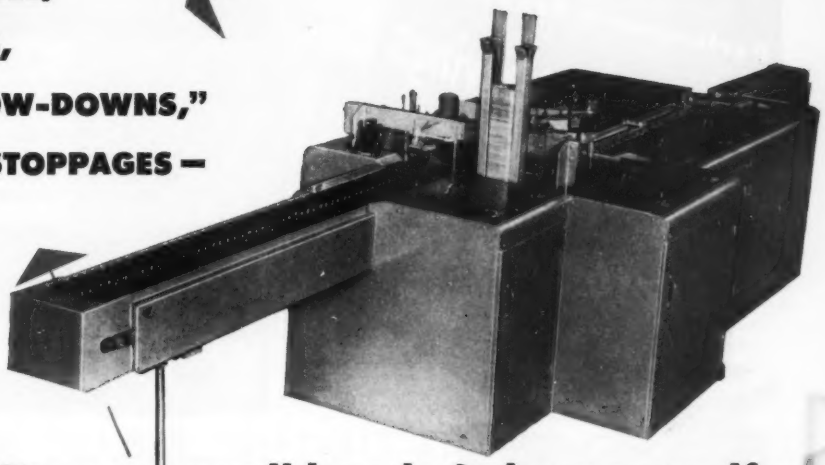
A NEW CARRIER FOR TWO 1-QT. MILK CARTONS
is now available to dairies from Edlo, Inc., 191 8th St., San Francisco 3, Calif. Patents are pending on the design of the "2-Pak" carrier, which consists of a cardboard strip that locks around the two 1-qt. milk cartons. A sturdy, double-thick handle is an integral part of its design. Regardless of the way it is carried, the lock cannot come loose and the containers cannot slip or separate, the company states. By merely pulling a tab, the strip unlocks and comes free, separating the two individual quart cartons. In addition to its convenience for shoppers, the 2-Pak provides a simple, practical half-gallon unit for dairies not equipped to handle half-gallon containers. First used by Bell Brook Dairies, Inc., San Francisco, the carrier is reported by that dairy to have increased sales of homogenized milk by 21% within four months. Applicable to either flat-top or pyramid-top cartons, the 2-Pak requires no special machinery; units can be assembled by hand at the rate of eight or nine per minute per man. For large-volume operations, an automatic machine is now being developed.



Carrier shown set up (right) and complete with two 1-qt. milk cartons.

INKS FOR PRINTING ON POLYETHYLENE FILM
have recently been introduced by the Gotham Ink & Color Co., 5-19 47th Ave., Long Island City 1, N.Y. Known as Ethalin inks, they are reported to be suitable for both aniline and rotogravure printing. The inks come in concentrated form, permitting thinning with ethyl acetate or Cellosolve, depending on the desired speed of drying. Qualities claimed for the new inks are color concentration, abrasion resistance and flexibility after aging. Though the ink will come off when tested with pressure-sensitive tape, it is said to have all the properties required for packaging use. No special procedure or undercoat

NO STRIKES,
NO LAY-OFFS,
NO "SLOW-DOWNS,"
NO WORK-STOPPAGES —



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YOU NEVER WORRY about carton loading when I am on the job. And my record shows average savings of $36.33 to $189.40 per day.

Never absent or tardy, no vacations or sick-leave, for me.

I REQUIRE NO JOB TRAINING, and I work well with "green" or untrained help. I make no mistakes; I help prevent mistakes by others.

Exemplary habits — never a hangover — no "nerves" or temperament. That's my deportment record.

A wealth of experience, indicated by detailed records of 97 different jobs, out of the thousands I have held and am holding. Whether simple, one-piece loads, or multiple loads of containers, liners, leaflets, with or without code numbers, tucked or glued flaps; I take them in stride.

Jones fully automatic constant motion Cartoning Machine

The record of 97 such jobs is detailed in a book which will be sent to you FREE on request. It compares costs of hand loading with my fully automatic carton loading, for all types of loads— from the simplest to the most complicated. Ask for your copy today.

R. A. JONES & COMPANY, INC.

Cartoning Machines — Soap Presses

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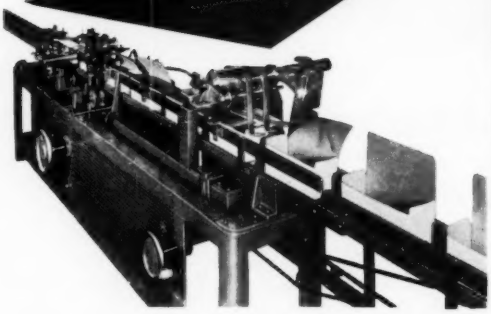
Performance Proves . . .
Tremendous Savings
with Peters New
Carton Closing
MACHINE

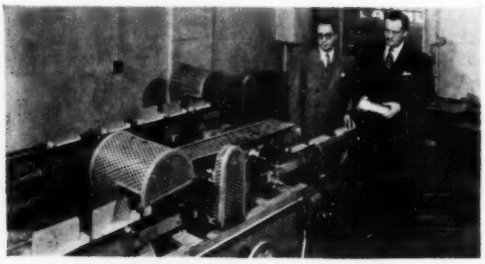


Slashes Time, Labor and Material Costs

Here's a carton closing machine that pays for itself in short order! It's versatile and efficient—and features quick adjustability on the job.

On one recent installation, this new Peters Model CCY Closing Machine cut operator time by 1/3, eliminated a wrapping machine and also eliminated the need for critical cellophane. An automatic, fast-sealing-gluing unit helped make these savings possible.

Demand for this new Peters machine is accelerating rapidly. Be sure to learn more about it—and place your order—soon.



The versatile, adjustable Model CCY Peters Carton Closing Machine has many applications. For complete information, write for descriptive folder, or send sample of your carton. Specific recommendations will follow promptly.

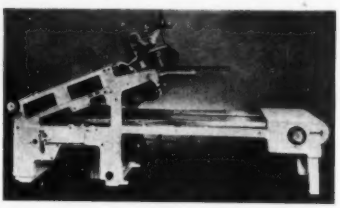
Peters MACHINERY CO.

4712 Ravenswood Avenue • Chicago 40, Illinois

Equipment and materials

is reported to be necessary in using the inks; the film is printed in the same way as PT cellophane, using a minimum of heat in drying to prevent film distortion.

A NEW SANDWICH-WRAPPING MACHINE
that will wrap a sandwich in cellophane without the necessity of using a card has been introduced by the Package Machinery Co., Springfield, Mass. This new Model U-6 will also wrap



Products packaged by the new sandwich-wrapping machine at the left are shown below.

small pies and cookies placed on a flat card or a card with upturned ends. The machine requires only one hand-wheel adjustment for the length of the product. Height and width are automatically taken care of by a self-measuring paper feed, which enables two or three sandwiches stacked on top of each other to be wrapped as a single unit. Speed of the machine is approximately 40 packages per minute. It can be equipped with a top-labeling device which automatically imprints labels in roll form, cuts them from the roll and seals them to the top of the finished packages.

A NEW METHOD OF ENGRAVING LINE DRAWINGS
on rubber has been developed by the Stone Container Corp., 4200 W. 42nd Pl., Chicago 32, that permits over-all advertising patterns to be economically printed by the aniline-rotogravure process on corrugated paperboard to be fabricated into shipping containers. The firm states that the new system will result in considerable savings for users of boxes which are blanketed with colored line patterns.

SILK-SCREENED GIFT PAPERS
printed on a newly developed silk-screen printing machine which is said to permit this type of printing in continuous web form for the first time are being offered by Sirocco, 425 W. Rock Ave., New Haven, Conn. The company can offer up to five reams (1,390 yds.) of paper in a continuous roll. Standard width is 26 in., but papers can be printed up to 30 in. wide. Stock designs are available and the company also does custom printing of customer's designs.

A NEW RESIN PROTECTIVE COATING LINER
called "Synthetasine 100" which through mechanical and chemical resistance is said to broaden the field of products to be successfully shipped in lined steel containers is now available commercially, according to Synthetasine Protective Coatings, Inc., 600 Fifth Ave., New York, licensor of the new product. The product was developed by Battelle Memorial Institute scientists, whose studies are said to show it to be resistant to the following types of products: alkali, dilute mineral acids, chlorinated solvents, formaldehyde (36-38% aqueous), detergents, detergents combined with hydrocarbon solvent, fatty acid and emulsions. Synthetasine 100 is said to combine exceptional flexibility and resistance to normal abuse in shipping and moving lined containers, and is not easily shattered. Syntheta-

It's Not Only the Heat . . It's the Humidity

Humidity isn't much fun when you are the subject. But Vaposet inks love moisture, and they set instantly on application of steam or vaporized water. They are the nearest to odorless inks yet achieved. Jobs can be put through waxing machines within two hours after printing—the real answer to printing, waxing and rewinding. Vaposet inks print clean, have superior sealing qualities, work better on sealing machines.

Right from the Start Let Inks Play a Part

"Think about ink while the package is still a gleam in the designer's eye," that's the way to start a package production job right. You get better results all around when you call your printer early. He can then consult his ink supplier. Printing problems are minimized and colors are selected which can be matched in inks that have the resistance characteristics you want.

IPI, Gemtone, Vaporin, Vaposet, Anilox, Elixirin, Tri-Metal and Press-tested are trademarks of Interchemical Corporation.

IPI • DIVISION OF INTERCHEMICAL CORPORATION • 67 WEST 44th ST., NEW YORK 18 • ADDRESS INQUIRIES DEPT. A

100% PIGMENTED ANILOX FOR OPACITY WHERE IT'S NEEDED ON CELLOPHANE

Anilox inks for aniline and *Aniloz* presses work well on highly plasticized grades of cellophane and other transparent materials, including polyethylene. Anilox inks have the color strength needed to produce opaque results—they're 100% pigmented. Lightfastness is tops.

Anilox inks, used with the famous IPI Anilox system of ink distribution, print sharp and uniform, look sharp on the package—need no slip sheeting. Anilox inks offer wide color choice for practically all types of stock.

IPI VAPORIN INKS SPEED BAG AND LABEL PRINTING

IPI Vaporin inks are especially suited to high-speed printing on paper bags and labels. They are stable at room temperatures but set in a split second at elevated temperatures. Vaporin inks print sharp and bright, and bind firmly to stock. They set and dry so fast that absorption by stock is reduced to a minimum, and slip sheeting is eliminated.

For bag printing involving waxing, IPI Vaposet inks are recommended—in waxing machine 2 hours after printing.

MASTER CRAFTSMEN PICK IPI OFFSET INKS TO PRODUCE HIGH GRADE CIGAR BOX WRAPS

IPI INKS FOR ALL PACKAGE PRINTING

There are IPI Inks to meet every package printing demand—Gemtone Process Inks—Standard Process Inks—Vaporin heat-set inks—Vaposet moisture-set inks—inks for corrugated and fibre board—Anilox Inks for Aniline type presses—wash out bag inks—Press-tested Offset Inks—inks for foils, glass and plastics—Metal Decorating Inks—Elixirin Inks for wet-ink varnishing. Also Litho supplies and plates—including the famous IPI Tri-Metal Plates—Blankets, Aquatex, Dampabase, chemicals, crayons, marbles, sponges, etc.

With Schlegel Litho Corp. It's IPI "Press-Tested" Inks for Finest Quality Work

For over a century Schlegel Lithographing Corporation (New York, N. Y.) has been noted for fine lithography. The master craftsmen of this pioneer firm, founded in 1841, are experts in producing high grade cigar box wraps and labels—like those for nationally known Dutch Masters cigars (made by Consolidated Cigar Corp., close neighbor of IPI in New York). These experts choose IPI "Press-tested" offset inks for their highly specialized work.

IPI Inks Are Uniform, Have Color Strength

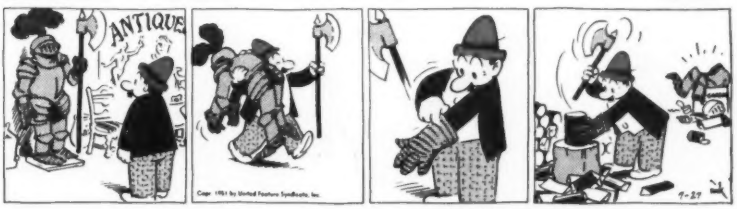
Offset inks for cigar box wraps and labels must be tops in quality. The work demands inks with uniform characteristics—each batch must perform like the last. They must have extra color strength and be formulated to dry completely before the bronzing operation. IPI inks meet all these requirements in every respect.

IPI Inks Meet Needs of All Types of Offset Work

Fine cigar box wraps are just one type of work for which IPI offset inks are preferred. Leading offset houses are turning to IPI for better results in every field of lithography.

Lithographers tell us that for extra snap, color strength, clean tints and good drying properties, there is nothing like IPI "Press-tested" offset colors—both process and regular. Ask your IPI salesman to help you solve your offset ink problems.

FERD'NAND • **Mail Strategy** **By Mik**



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FOR GAS, LIQUID AND GREASE-TIGHT PACKAGING ON HIGH SPEED EQUIPMENT

Special laminations, engineered to your specific requirements, are part of our service. Consultations are without obligation. Write us.

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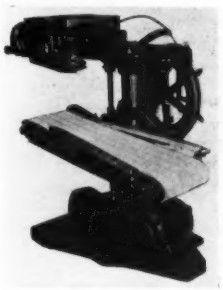
Equipment and materials

sine Protective Coatings, Inc., is owned by members of the Steel Shipping Container Institute, Inc., who created the research program responsible for this development. Licensees manufacturing Synthetasine 100 are the Finishes Division of Interchemical Corp. and Stoner-Mudge, Inc.

COMPLETELY AUTOMATIC BAG-CLOSING MACHINES capable of closing up to 2,000 paper bags per hour are now available from the Hamer Machine Co., 6417 Cambridge St., St. Louis Park, Minneapolis, Minn. The machine is designed for low-cost, mass-production packaging of bags weighing from 2 to 100 lbs. when filled. It is said to package such products as potatoes, feeds, chemicals, etc., with equal ease and even powder-fine materials will not seep through the ring-sealed top. Chain drives are arranged to compress necks of bags, then seal them with 12-, 14- or 15-gauge metal wire to form neat, uniform closures that will not break open under repeated jolts in shipment, the manufacturer states. The machine may be added to existing facilities or easily adapted to a wide variety of individually engineered conveyor installations. Standard conveyor which carries bags to the tying mechanism is 41 in. long, 9 in. wide and can be raised vertically from a point 19 in. above the floor to a maximum height of 30 in. Other sized conveyor and belt feeder installations can be built to specifications. The machine takes up only 32 by 45 in. of floor space and is powered by a ½ or 1 h.p. electric motor. Mounted on casters, it can be easily moved about the plant.



NEW-TYPE FABRICATED POLYETHYLENE CONTAINERS ranging in capacity from 1 qt. to 5 gal. are being offered by the American Agile Corp., 5806 Hough Ave., Cleveland, Ohio. These new Agilene bottles, jars and safety jugs are welded by the hot gas welding method and are individually tested with air pressure to assure leakproofness. The bottles have a tight-closing screw cap, the jars are provided with tight-fitting removable lids and the safety jugs are of special design said to reduce the hazards of handling corrosive chemicals.

THREE NEW TYPES OF PACKAGING MATERIALS designed to comply with federal specifications for cellulosic cushioning materials (UU-C-843, 19 June, 1950) have been developed by the Wood Conversion Co., First National Bank Bldg., St. Paul, Minn., to fit the needs of overseas packaging for Army and Navy war material as well as domestic users. Type I Cargo-Pak is absorbent (non-water resistant) and is said to be capable of taking up more than 16 times its own weight in water, making it suitable for packaging liquids and acids. Type II Cargo-Pak is partially absorbent (water resistant) and is suitable for general cushioning and packaging of furniture, glassware and other breakables. Type III Cargo-Pak is non-absorbent (water resistant) and will take up no more than three times its weight in water, which suggests its use for packaging delicate instruments, steel parts, guns and engines.

TWO NEW MODELS OF A BAG PACKER are being offered by the H. L. Stoker Co., Claremont, Calif. The Model 1-5 is designed to fill valve bags with a wide variety of granulated or powdered materials, while the Model IN is for bagging dry insecticides. The 1-5 machine fills 1 cu.

ft. in 5 seconds regardless of the density of material or type of container, according to the manufacturer, and will accurately pack predetermined weights within ounces. This packer has been used in commercial operation handling such materials as sulphur, pulverized coal, flour, sugar, malt, paint pigments, cellulose gum and other products. The Model IN fills 50 lbs. in 6 seconds and operation is said to be simple, fast and accurate. An agitator assembly keeps materials free-flowing, rate of flow is adjusted by a feed gate in the hopper and material is compressed as it is filled to eliminate air.

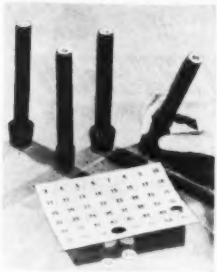
LOW-COST CORRUGATION MATERIAL

developed specifically for shipping departments that use corrugated board as a separator, liner or cushioning for fragile items is being offered by the Shelliner Division of Shelton Mfg. Co., Inc., 591 Ferry St., Newark, N. J. Known as "Shelliner," this new material has no lining, yet is said to retain its corrugation characteristics permanently. It can be used in place of lined corrugated to provide maximum protection at less cost than regular corrugated materials. Packaged in stock rolls of 12, 18, 24, and 36 in. wide, 250 ft. to the roll, it can be run to specification up to 72 in. in width. It is also available in sheets cut to size.

A NEW HIGH-SPEED CUTTER-LAYBOY UNIT

being offered by The Clark-Aiken Co., Lee, Mass., is said to incorporate many features not heretofore offered on low-priced cutters. Developed for sheeting cellophane, waxed paper, foil and practically all types of paper, the new Type D cutter-layboy is designed for sustained accuracy at high speeds with the cutter, delivery and layboy completely coordinated for unit operation. A scale-marked slitter shaft is provided for accurate slitter setting and a similar scale setting of joggers permits alignment of sheets without the use of measuring tape.

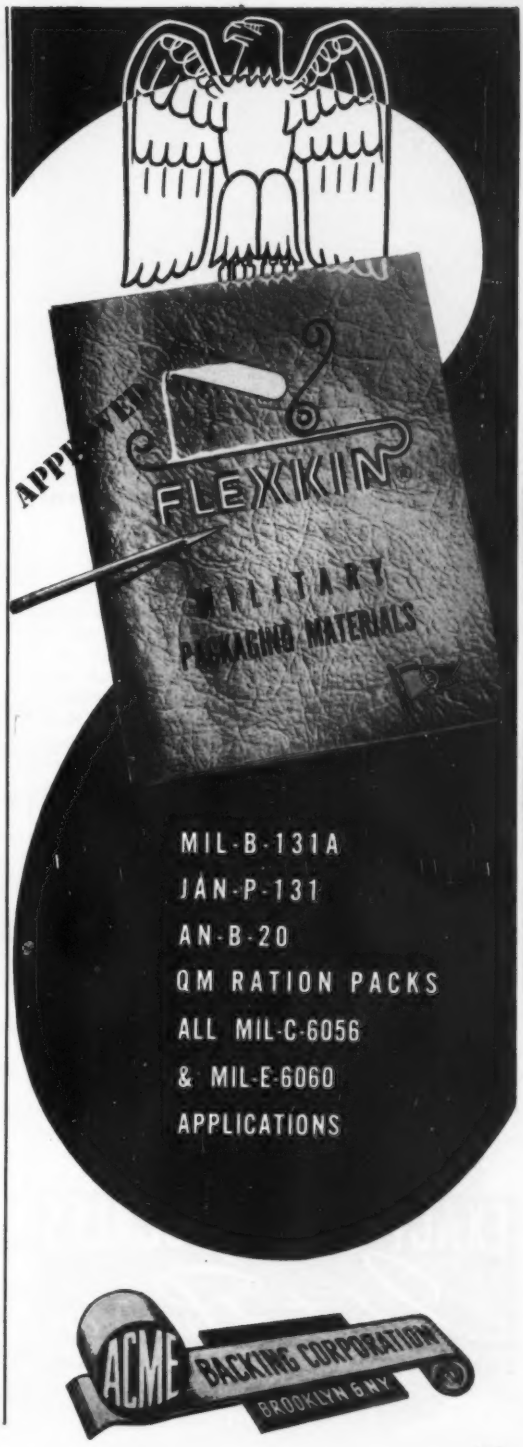
PLASTIC PRICE-MARKING LABELS



for identifying merchandise price-marking dowels are being produced by The Hopp Press, Inc., 460 W. 34th St., New York. They are made of Vinylite plastic rigid sheet, a product of the Bakelite Co., a Division of Union Carbide & Carbon Corp., New York. The printed price on each label disk is protected by transparent Vinylite plastic against water, ink, oil and wear, and can be wiped clean with a damp cloth.

A NEWLY DEVELOPED DOMESTIC WAX

that it is claimed successfully replaces imported Carnauba wax at only a fraction of the cost has been announced by the Concord Chemical Co., Moorestown, N.J. Known as Concord Wax #407, the material is said to be suitable to use for almost any purpose for which a Carnauba or Candelilla emulsion is suitable: paper sizings and coatings, citrus fruit wax dips, protective coatings, etc. Melting point of the new wax is 86 deg. C., about five degrees higher than that of imported #3 N. C. Refined Carnauba.



An efficient, well planned Spinach packaging and weighing operation in New York State.

Spend Weighing Equipment Dollars Wisely . . .

The facts are that practically everything processed uses scales . . . weighing equipment of some nature. Such operations as ingredient compounding, laboratory work, blending of colors, counting by weight, general packaging and production line check-weighing are the most common uses. Many, many products of all kinds owe their exceptional uniformity and accuracy to sound scales. Engineers entrusted with profitable production now generally agree the weighing element is one of the most vital cost control measures at their disposal. This is why weighing equipment dollars should be spent wisely. Few individual equipment requirements do more to improve uniformity and quality than the right weighing units in the right place, and no weighing equipment is better than EXACT WEIGHT Scales. Today these famous industrial scales are doing more varied jobs, in more plants, in manual, semi-automatic and fully automatic operations than ever before. Their capacity to save time, money, product and labor are thoroughly recognized by men responsible for profitable volume production everywhere. Write for information to cover your needs.

Sales & Service from Coast to Coast

EXACT WEIGHT SCALES

Industrial Precision

THE EXACT WEIGHT SCALE COMPANY

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HAYSSEN-WRAPPED

IT PAYS TO WRAP THE HAYSSEN WAY

HAYSSEN WRAPPED

DESCRIPTIVE LITERATURE ON REQUEST

Hayssen ELECTRIC EYE WRAPPING MACHINES

Hayssen Automatic Wrapping Machines produce neat packages at low unit-cost. Six-sided designs are registered by the Hayssen Electric Eye, and uniformity in appearance is maintained. One machine wraps many package sizes, and handles wrapping material in economical rolls. Send today for descriptive literature, and name of representative.

HAYSSEN MFG. COMPANY • SHEBOYGAN, WISCONSIN

home necessity
This month NATIONAL WINE WEEK is observed by promotion and celebration.
The real celebration, however, is unknowingly held in the home where wine is used every week and every day.
By fine production and inspired merchandising, national wineries have made their vintages a household necessity not only for celebrations but as an integral part of the meal and in the preparation of magnificent dishes.
We are proud that H-A WINE BOTTLES help in the distribution and sale of our great national wines.
WINE
HAZEL-ATLAS GLASS COMPANY
Wheeling, West Virginia

Plants and people

Olin Products Co., Inc., has announced the appointment of **Edwin L. Holloway** as Midwestern division manager and **Robert R. Hopper** as assistant to the vice president. Mr. Holloway, whose headquarters will be in Chicago, joins Olin after handling advertising sales for the *Ladies Home Journal.* Previously he was industrial sales manager for Dennison Mfg. Co. Mr. Hopper has been with Olin for 10 years and comes to his new post from the research department of Olin Industries' Western Cartridge Co., Mr. Hopper will have headquarters at Olin Products Co.'s New York offices, 655 Madison Ave.

E. L. Holloway (left) and R. R. Hopper.

Mr. Kautz

Raymond J. Kautz has been appointed assistant manager of Olin Products Co., Inc. Mr. Kautz joins Olin after four years as general sales manager of the Simmons Slicing Knife Co. He also has been associated with Bulkley Dunton and with Dennison Mfg. Co.

W. H. Depperman, publicity executive for many years with Steve Hannagan, has been appointed director of public information for **Olin Industries, Inc.,** parent company of Olin Products, and will have supervision over advertising, publicity and related subjects. Mr. Depperman will be located at headquarters in Alton, Ill.

Sherman Paper Products Corp., Newton Upper Falls, Mass., recently opened its third plant in Chicago. This new production unit occupies 65,000 sq. ft. of space on a single floor and includes a sales office and large warehouse facilities for the storage of raw materials. With the new facilities to service the Midwestern area, the East and West Coast Sherman plants will be able to give faster and more efficient service to their respective areas, it is said.

Sherman Paper Products Corp.'s newly opened Chicago plant.

Carl F. Haberstick is now in charge of the Chicago sales office of the **Hazel-Atlas Glass Co.,** succeeding **G. M. VanKirk,** who has retired after 45 years with the company. Mr. Haberstick has been with the company for 34 years, 25 of which have been spent in Chicago.

Denton Anderson, assistant vice president of **Plax Corp.,** Hartford, Conn., manufacturers of polyethylene bottles, has also been named general sales manager. **W. F. Ebling** continues as sales manager.

Albert R. Jasuta, former packaging specialist for the Westvaco Chemical Div., Food Machinery & Chemical Corp., has joined the **J. T. Baker Chemical Co.,** Phillipsburg, N. J., as packaging engineer. Mr. Jasuta is the author of a technical article which appeared in MODERN PACKAGING recently on the development of a new monel drum for packaging bromine. At Westvaco Chemical Mr. Jasuta has been succeeded by **D. R. Tietjen,** his former assistant.

L. T. Sheffield, president of **The Sheffield Tube Corp.,** New London, Conn., has been appointed New England representative of the Collapsible Tube Industry Advisory Committee, Office of Price Stabilization.

Joint purchase of **Raisin-Thiebaut, Inc.,** West Coast makers of set-up paper boxes, has been announced by two executives of the **Bemiss-Jason Co.,** San Francisco, suppliers of corrugated paper specialties. Buyers are **R. P. Bemiss** and **W. E. Jason,** president and vice president, respectively, of Bemiss-Jason. **Wilson J. Field** has been appointed new general manager of the box firm. Under Mr. Field, Raisin-Thiebaut will continue to operate with its present employees. Along with his duties there, Mr. Field will remain as president of Custom Paper Products, San Francisco.

Mr. Thomson

Chester L. Thomson, recently with Calvert Distillers, has been appointed vice president and general sales manager for **Einson-Freeman Co., Inc.,** Long Island City, N. Y., display lithographers. Mr. Thomson will direct the new customer display merchandising service, recently inaugurated by Einson-Freeman, which is designed to coordinate creation, production and merchandising of retail store and window display material.

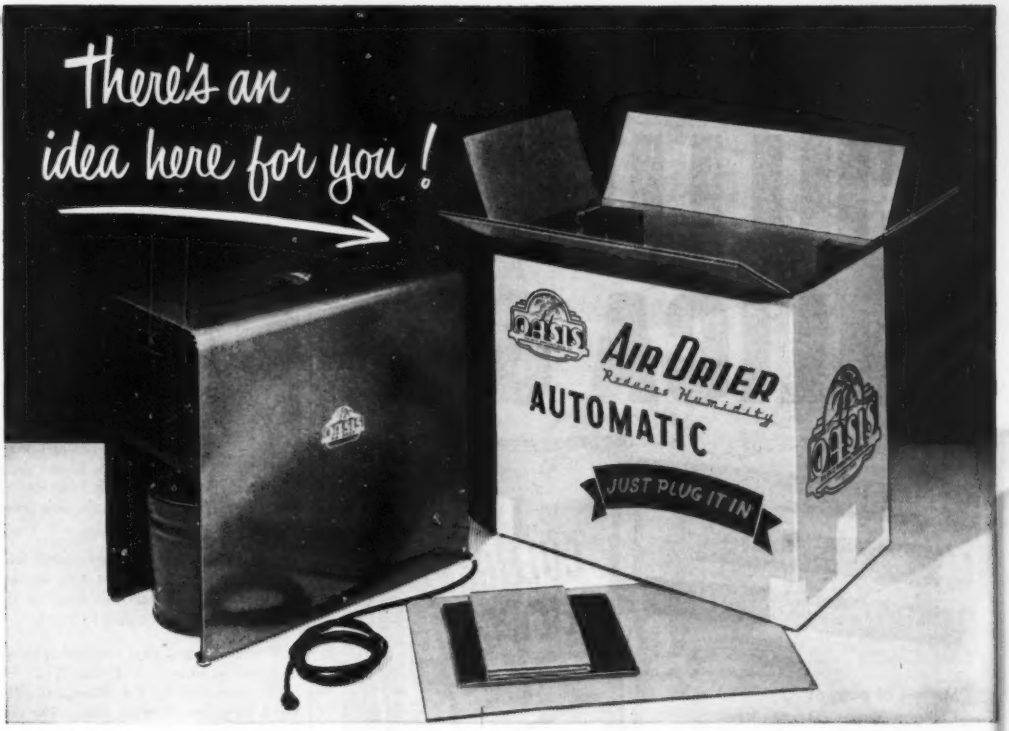
Shellmar Products Corp., Mt. Vernon, Ohio, has created two new executive staff positions in its Shellmar Division as part of its program of integrating administrative procedures. **W. L. Moore** has been named administrative coordinator and **T. R. Baxter** has been designated as new products manager.

The Stanart Printed Specialty Co., specializing in the production of printed and die-cut pressure-sensitive labels in continuous rolls, has begun operations in its plant at 100 E. 144th St., New York. A complete service from creative art to multicolor reproduction of self-adhesive labels, under the brand name of Able-Stik, will be offered. **The Allen Hollander Co., Inc.,** 385 Gerard Ave., New York, has been appointed a distributor for the Stanart company.

Wilder G. Penfield, Jr., has been appointed export manager of **The Borden Co.'s** Chemical Division. Also announced is the resignation of **Sam Gurley, Jr.,** as sales manager of the Durite Department of Borden's Chemical Division. **William F. Leicester,** vice president in charge of the division, has taken over Mr. Gurley's duties until a successor is appointed.

Milan F. Dudeff has been elected vice president for sales and engineering and treasurer of the **Charles Beck Machine Corp.,** Philadelphia, makers of converting machinery. **Henry E. Scherer** was named secretary of the corporation.

Maj. Edward M. Porter, formerly president of Wraps, Inc., New York, is now on duty in the **Command Packaging Of-**



this air conditioner is "travel conditioned"

Even the finest appliance is useless, unless it is *delivered* to the customer in good condition. And to make sure this efficient Oasis Air Drier does arrive in perfect condition, the Ebco Manufacturing Company, Columbus, Ohio, ships it in this H & D engineered shipping box. Specially designed interior packing, with wax-coated surfaces to protect the product's finish, gives complete protection against jolts and bumps in transit.

The H & D Package Laboratory is ready to help with any shipping problem, to provide extra protection, or to give better display . . . increased sales . . . lower shipping and packing costs. For booklet, "Package Engineering," write Hinde & Dauch, 5107 Decatur St., Sandusky, Ohio.

H&D®

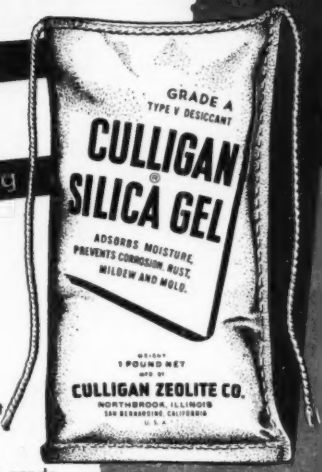
HINDE & DAUCH
Authority on Packaging

FACTORIES IN: Baltimore • Buffalo • Chicago • Cleveland
Detroit • Gloucester, N. J. • Hoboken, N. J.
Kansas City, Kan. • Richmond, Va. • Sandusky, Ohio
St. Louis • Watertown, Mass. • *Offices in principal cities.*

BACKED BY YEARS OF RESEARCH,
PRODUCTION AND PERFORMANCE...

CULLIGAN® SILICA GEL

the ideal desiccant
for method II
dehydrated packaging



Millions of bags of Culligan Silica Gel have been delivered for a multitude of Method II packaging applications. Your assurance of Culligan service, quality and reliability is attested in the fact that over 2,000 leading organizations have consistently specified Culligan Silica Gel. Carloads of this Culligan grade A desiccant have been produced on prime contract directly with the Military Services.

- **Culligan Silica Gel meets current military specifications. Prices are competitive.**
- **Available in all standard bag sizes, in bulk, or custom packaged to fit your immediate needs.**
- **National field-staff service of expert Culligan packaging engineers.**
- **Two convenient shipping points: Northbrook, Ill. (suburb of Chicago); San Bernardino, California.**

description...

Culligan Silica Gel is a highly adsorptive granular form of pure silica, consisting of hard, glassy, rounded particles . . . ranging from 6 to 80 mesh in particle size. Interspersed with minute capillaries, it is estimated that one cubic inch of Silica Gel contains an acre of surface available for adsorption! Culligan Silica Gel will adsorb up to 40% of its own weight of moisture, and is non-diliquescent.

write for price list
and specification sheet

CULLIGAN DESICCANTS

CULLIGAN ZEOLITE COMPANY
Home Office • NORTHBROOK, ILLINOIS

Copr. 1951 C. Z. Co.

Plants and people

fice of Headquarters, Air Materiel Command, U. S. Air Force, Wright-Patterson Air Force Base, Dayton, Ohio. He is serving as branch chief of the Containers & Materials Branch, concerned with package design and development.

Mr. Lieberich

Fred Lieberich, Jr., has been named executive vice president of the **Container Equipment Corp.,** Newark, N. J., manufacturers of packaging machinery. Mr. Lieberich has had broad experience in the manufacturing business, his last activity being as executive vice president of William Crabb & Co.

Robert L. Keats has been appointed sales manager of the **Paper Art Co.,** Indianapolis, Ind. Mr. Keats has been in the paper industry for the past 13 years.

The establishment of a regional sales office and warehouse in Dallas, Tex., has been announced by the **Minnesota Mining & Mfg. Co.,** St. Paul, Minn. The new facilities are located at 1221 Dragon St. and officials in charge are **Walter F. Gruetzman,** office manager; **Ray Paulson,** sales manager for abrasives and related products; **Fred Richardson,** sales manager for cellophane tapes.

Mr. Burton

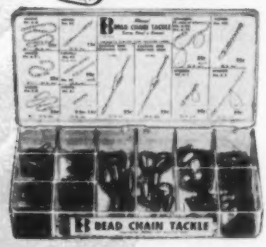
Richard C. Burton has been elected vice president-operations of **Valley Containers, Inc.,** Youngstown, Ohio, a subsidiary of **The Ottawa River Paper Co.,** Toledo. Mr. Burton has also been elected vice president of the parent company. He was with Gaylord Container Corp. Prior to his war-time service and since his release from the Navy has been in charge of the corrugated container division of Union Bag & Paper Corp.

Negotiations are in progress for **Fairfield Paper & Container Co.,** with plants in Baltimore, Ohio, and Beaver Falls, Pa., and the **Dresden Paper Mills Co.,** Dresden, Ohio, to merge their interests with those of **Gaylord Container Corp.,** according to **C. W. Gaylord,** president of Gaylord Container Corp., and **M. D. Custer,** president and treasurer of the two Ohio paper companies.

Stephen J. Geoghegan has been appointed vice president in charge of materials con-

CRAFTSMEN LIKE THEM

SPORTSMEN WANT THEM



Double Duty... Double Appeal

HOUSEWIVES USE THEM

VLCHEK PLASTIC BOXES

with Fore and After Uses

See your merchandise through the eyes of discriminating consumers who are looking for that extra something in every purchase.

CUSTOM Plastic Cases that will give your product initial sales boost — gain preferential counter display space, plus that added touch that wins new friends — customers and retailers alike.

STANDARD Plastic Merchandisers — Durable — attractive—available in many sizes and compartment arrangements. Just the thing for small assortment merchandising that requires organization.

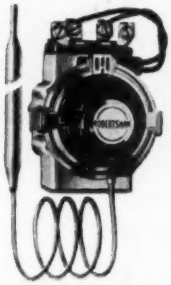
Vlchek Plastic Boxes are economical in any quantity. Whatever your product, if packaged, contact us and see what our experienced designers can suggest.

PLASTICS DIVISION

The VLCHEK TOOL COMPANY

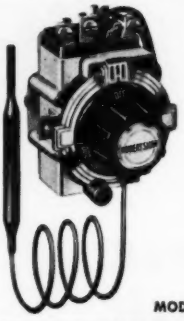
3001 EAST 87th STREET · CLEVELAND 4, OHIO

Robertshaw® THERMOSTATIC CONTROLS SERVE THE PACKAGING INDUSTRY IN MANY WAYS



A sturdy, dependable, automatic, rugged, responsive direct-acting, electric thermostatic control for jaw sealers, band or belt sealers, tester equipment, bake ovens, glue pots, etc. (Available also in Reverse-Acting Models.)

MODEL D-1



CYCLES AS A THERMOSTAT

AUTOMATICALLY CUTS OUT AT SET LIMIT

STAYS OUT UNTIL MANUALLY RESET

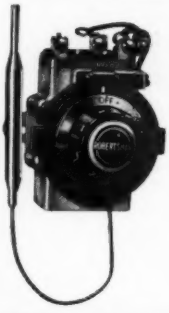
A double pole, single throw temperature controller with an auxiliary single pole, single throw switch that automatically cuts off all current and locks switch in an open position whenever the temperature exceeds temperature range by approximately 7° F. in liquid or 12° F. in air. Available in AC only.

MODEL H-1

HI-HEAT TO LOW HEAT

FOR BLOWER AND HEATER

FOR AGITATOR AND HEATER



A two-circuit thermostat. When two heating elements are used, high heat element automatically cuts in when thermostat calls for heat. When set temperature is reached, main contacts are automatically broken and low, or holding temperature is cut in to function until drop in temperature again calls for heat.

MODEL F-1

Write for descriptive literature.

In Home and Industry, *EVERYTHING'S UNDER CONTROL*

Robertshaw

THERMOSTAT DIVISION

ROBERTSHAW-FULTON CONTROLS COMPANY

YOUNGWOOD, PENNSYLVANIA

Plants and people

trol for the **Industrial Tape Corp.**, a subsidiary of **Johnson & Johnson**, New Brunswick, N. J.

Mr. Henrikson

Carl H. Henrikson, Jr., has been appointed vice president and general manager of **S-D Surveys, Inc.**, New York. Mr. Henrikson was formerly with J. M. Mathes, Inc., as director of research. During the last war he was regional business consultant with the U. S. Department of Commerce in New York. Mr. Henrikson has contributed to *Modern Packaging Encyclopedia.*

John W. Fisher, vice president and manufacturing executive for **Ball Bros. Co., Inc.**, Muncie, Ind., has been named to the only dual post in the company's management, that of vice president in charge of the metal closure and the zinc rolling mill divisions. Also announced by Ball Bros. is the appointment of **Kyle L. Menuez,** an executive of the Gro-Cord Rubber Co., as general manager of Ball's rubber products division. Mr. Menuez will continue to serve as a member of the board of directors of the Gro-Cord company, but has resigned from its vice presidency and general managership.

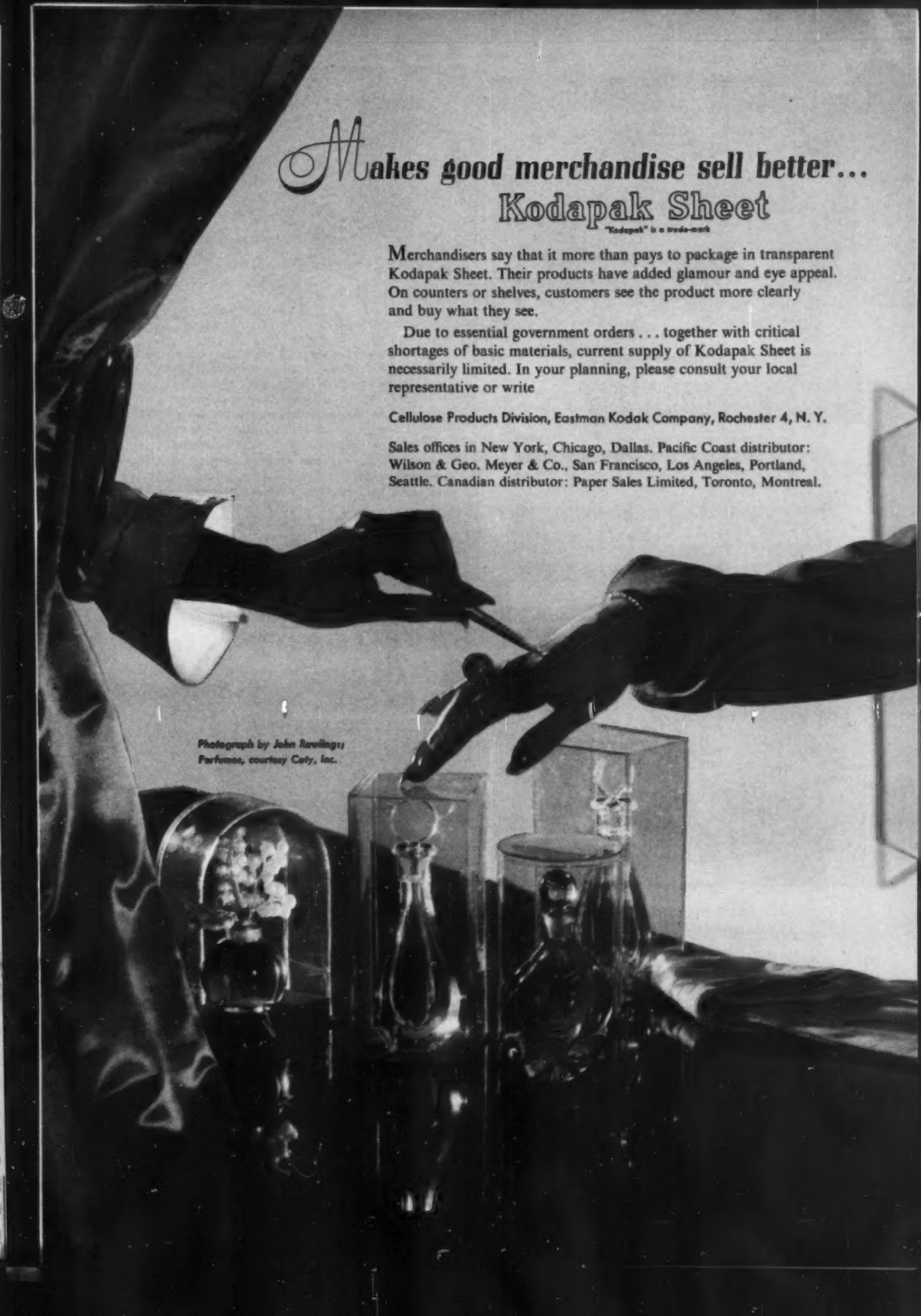
Mr. Denney

R. J. Denney, active in the food-packaging industry for many years, has been named sales manager of **The Econ-O-Seal Co.**, a division of **Basca Mfg. Co., Inc.**, Indianapolis, Ind. Mr. Denney, who previously was with the Aluminum Co. of America, will supervise sales, new products, publicity and promotion. The Econ-O-Seal Co. makes all-aluminum single closures and anodized aluminum dairy and food packaging specialties.

Charles Cruze, Los Angeles industrial designer, has been elected chairman of the **Pacific Coast Chapter** of the **Society of Industrial Designers.**

Charles W. Harper has been appointed manager of the informative packaging and labeling division of **Sears, Roebuck & Co.**, Chicago.

The following appointments of sales representatives for Kimpak protective cushioning and other industrial creped wadding products have been announced by



Makes good merchandise sell better...

Kodapak Sheet

"Kodapak" is a trade-mark

Merchandisers say that it more than pays to package in transparent Kodapak Sheet. Their products have added glamour and eye appeal. On counters or shelves, customers see the product more clearly and buy what they see.

Due to essential government orders . . . together with critical shortages of basic materials, current supply of Kodapak Sheet is necessarily limited. In your planning, please consult your local representative or write

Cellulose Products Division, Eastman Kodak Company, Rochester 4, N. Y.

Sales offices in New York, Chicago, Dallas. Pacific Coast distributor: Wilson & Geo. Meyer & Co., San Francisco, Los Angeles, Portland, Seattle. Canadian distributor: Paper Sales Limited, Toronto, Montreal.

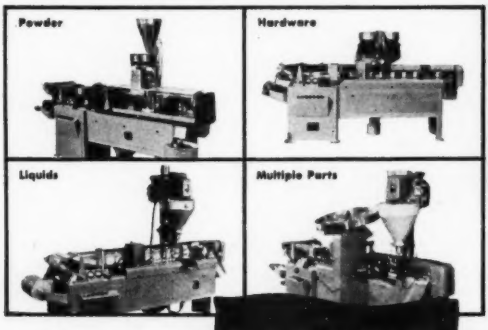
Photograph by John Rawlings; Perfumes, courtesy Coty, Inc.

AUTOMATICALLY ON ONE MACHINE

1. *Makes the bag from a roll of paper, film, or foil.*
2. *Fills the bag by count, by volume, by auger, or by special feeders.*
3. *Finishes up to 36,000 packages per eight hour shift.*

Here is the cost saving, streamlined way to package your product for maximum economy and plus sales! Base machine makes a pouch style bag, opens it for filling, seals it, and discharges a completed package. Design allows for selection of the best filling equipment available for your product. Special feeders for unusual items. Standard unit makes bags from heat sealing papers, foils, cellophane, laminations, etc.

Versatile - Economical - Fast



Whether your product is liquid, powder, solid, multiple items, or requires packaging under nitrogen gas, the Bartelt Machine will handle your needs. Write for details today.

BARTELT
Automatic Packager

BARTELT ENGINEERING CO., Rockford, Ill.

DOUBLE *Eye Appeal*

Here are shoulder type dropper service boxes that have a trim, ethical appearance which obtains the instant approval of both the pharmacist and the customer. Made on automatic equipment in our plant, these two-tone boxes are uniform in every dimension, fit closely and stand up under hard service. Because we make most styles of containers and combinations, we give your packaging problem a more dramatic, sales-producing solution. Call one of our representatives or write for free consultation service.

Folding Cartons
Transparent Acetate Boxes

PAPER PACKAGE COMPANY
1036 N. CAPITOL AVE., INDIANAPOLIS 6, IND.
Branch Offices: Chicago, Detroit, Cincinnati

Set-Up Boxes
Spiral-Wound Paper Tubes

SAVE...with this New Container of MOLDED PAPER by *Keiding*

Amazingly strong...
Light...
Low in Cost!

You, too, may have many uses for this tough new Keiding Molded Paper Container!

It has a tight-fitting cover, is ideally suited for granulated substances, powders, soaps, abrasives, small parts — even some liquids and semi-liquids.

Strong enough for shipping, attractive enough for a sales package, it is a sturdy container that will help solve your problems during the current material shortages.

WRITE for prices and samples. Standard colors, white — other colors available.

KEIDING PAPER PRODUCTS COMPANY
3048 N. 34th St., Milwaukee 10, Wisconsin
LARGEST MANUFACTURERS OF MOLDED PAPER CONTAINERS

Plants and people

Kimberly-Clark Co., Nennah, Wis.: **Raymond J. Miller**, formerly of the Market Research Division, has been assigned to Territory 2 in District II, comprising most of Ohio and parts of Pennsylvania and West Virginia; **William E. Cozens**, assigned to New York City; **Richard S. Pauli**, Boston; **Jacob O. Fritz**, St. Louis; **William W. Stodghill**, Cincinnati.

H. G. Bratt has been appointed general manager of manufacturing, Metal Division, **Continental Can Co.** Mr. Bratt formerly was manager of manufacturing for Continental's Pacific Division and prior to that was general manager of its Cuban division. He has been with Continental since 1943 and, in his new position, replaces **L. C. Walgash**, who resigned from the company. **Ellison L. Hazard** has been appointed to replace Mr. Bratt as manager of manufacturing for the Pacific (Metal) Division.

Mr. Bratt

Orrin R. Broberg has been named mechanical development engineer for **The Lamson Corp.**, Syracuse, N. Y., manufacturers of conveyors and automatic pallet loaders. He will be responsible for the design of all new Lamson products and will also formulate plans and policies for the mechanical development program.

The latex processing and sales divisions of **Federal Adhesives Corp.**, Brooklyn, N. Y., have been incorporated as a separate company, **Federal Latex Corp.** New officers are: **Mortimer E. Stern**, president; **Arthur Mayer**, vice president; **Philip M. Liner**, treasurer. **George H. Miller**, has been named technical director of the new subsidiary. The parent company has initiated an expansion program which will permit Federal Latex Corp. to operate its own laboratories, factory and sales offices.

Raymond J. Werner has been promoted to Eastern district sales manager of the **Chemical Division, Celanese Corp. of America**, New York. **Richard A. Schwab** has been named New England district manager, Mr. Werner's former post.

William W. Fitzhugh, Inc., makers of folding cartons and displays, announce the removal of their general sales office to 200 Fifth Ave., New York City.

A. R. Caputo, former assistant sales manager, has been named to head the expanded sales department at **The Ameri-**

Considering cost, convenience and packing output, PROTEX EXCELSIOR products are the most efficient cushioning money can buy. Properly used, they can reduce your shipping losses and lower your packing costs. Without cost or obligation we will gladly send one of our qualified packing engineers to your plant. He will help you analyze your methods and materials and create time and money saving packing.

NATIONWIDE DISTRIBUTION FROM 23 LOCATIONS

AMERICAN EXCELSIOR CORPORATION

1000-1020 NORTH HALSTED STREET • CHICAGO 22, ILLINOIS

AMERICAN FOREST PRODUCTS CO.
30th & Thompson Streets
Philadelphia 21, Pa.

ATLANTIC EXCELSIOR CO.
560 W. 29th Street
New York 1, N.Y.

EXCELSIOR SUPPLY CO.
E. 40th St. & King Ave.
Cleveland 14, Ohio

▶ **Look** at these aniline-printed boxboard jobs

▶ **See** their clean, sharp, crisp printing

▶ **Remember** they were printed* from MOSSTYPES®... *the pre-madeready, precision-molded rubber printing plates*

*By VAN VICK PAPER BOX CO., Duluth, Minn.

WORLD'S BEST SOURCE for...
RUBBER PLATES and DESIGN ROLLERS
MOSSTYPE CORPORATION

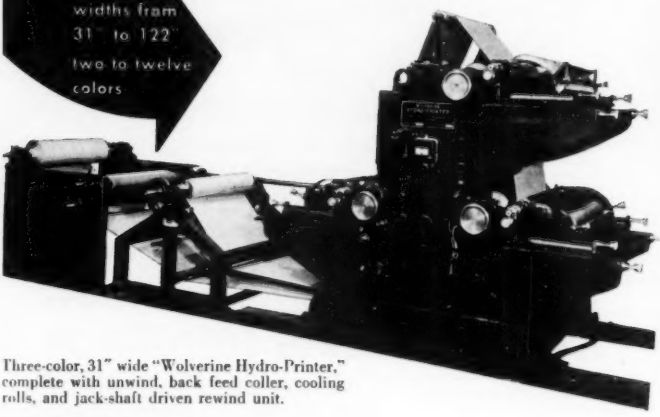
From ART to PLATES... 33 FLATBUSH AVE., Brooklyn 17, N. Y.
...a complete production service for converters everywhere

A UNIVERSAL PRINTING UNIT for EVERY PACKAGING NEED

"WOLVERINE HYDRO-PRINTER"

(automatic hydraulic aniline printing press)

widths from 31" to 122"
two to twelve colors



Three-color, 31" wide "Wolverine Hydro-Printer," complete with unwind, back feed coller, cooling rolls, and jack-shaft driven rewind unit.

Prints on —

foil • film • board • paper • plastic • cellophane

The outstanding printing results, simplified operation, matchless versatility and rigid, compact construction of the "Wolverine Hydro-Printer" are creating new standards for evaluating presses and their performance within the packaging industry.

It's quiet and vibrationless in operation, running with amazing smoothness, even at extremely high speeds. What's more, it's so designed that absolute color register is maintained while the unit is running.

- hydraulic, instant on and off impression control
- free wheeling, constant rotating ink rollers
- instantaneous running register control
- one single impression drive gear (no backlash)
- rigid, solid and compact 5-inch frame construction
- single push-button for complete control

If profits are your motive, you definitely need to know more about the high-speed, quality printing the "Wolverine Hydro-Printer" will produce. *Illustrated, detailed literature is available.*

"WOLVERINE CUB SHEETER" — the most accurate and highest speed sheeter on the market. Ask about it.

Wolverine

PAPER CONVERTING MACHINERY CORPORATION

3545 Seven Mile Road EAST • Detroit 34, Michigan

Plants and people

can Box Co., Cleveland, Ohio. The company has installed new equipment valued at $75,000 as part of its 50th anniversary expansion program.

Mr. Mills

Robert Gair Co., Inc., New York, manufacturers of folding cartons, paperboard and shipping containers, announce the appointment of **Beaven W. Mills**, formerly art director of the company, as sales manager for Gairvure cartons. Increased use of Gairvure cartons, the company reports, requires that this segment of the folding carton division have specific supervision. Mr. Mills will be responsible for the promotion, development and sale of sheet-fed gravure cartons.

Miss Berte Samuel, formerly in the packaging department of **Helena Rubinstein, Inc.**, has opened her own business as package designer at 160 Fifth Ave., New York.

The Gummed Products Co., Troy, Ohio, has announced a new name for its line of papers made with heat-seal adhesive—Trojan Firebird. A new trademark in the form of a fire-red bird in flight has been developed. Both will be used extensively in the company's promotional program.

The board of directors of **Crown Can Co.**, Philadelphia, has elected **Howard Eddy** as company treasurer.

Announcement has been made of the transfer of **J. B. Post**, in charge of sales for the Films and Flooring Division of **The Goodyear Tire & Rubber Co.**, from the Chicago district to Los Angeles as West Coast district manager, and the appointment of **Gordon W. Cummins** to the Chicago post.

The Mead Sales Co., Dayton, Ohio, has announced that **Joseph G. Turner** will be located in the Chicago sales office of the company. He will be sales representative for both Wheelwright and Disco Papers in the Middle West.

Cadillac Products, Inc., industrial paper specialties, Ferndale, Mich., have opened a Chicago sales office under the supervision of **P. O. Pedersen.** Mr. Pedersen had been with the Rapinwax Paper Co.

Michigan Molded Plastics, Inc., Dexter, Mich., has announced the election of **R. C. Bedell** as vice president in charge of en-

At your service!

—for your

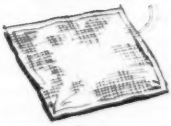
MILITARY PACKAGING NEEDS

Component Parts

Soluble Foods

Electronic Units

Machine Tools



Case Liners

Metal Parts

First Aid Dressings

Boullion Concentrates

Just a few of the many possibilities utilizing laminated protection.

Crystal Tube is geared to furnish you sound, dependable help, and rigidly adhere to packaging specifications for Flexible Barrier Materials . . . as required by **Jan-P-117** (types 1, 2 and 3)

Jan-B-121

Jan-P-131

Class A .....Grease Resistant
Class B .....Water Resistant
Class C .....Grease and Water Resistant
Class D .....Grease-Water-Moisture-Vapor Resistant

The following laminated materials are available with heat-seal coating. They may be made into barrier bags, envelopes, and pouches (plain or printed), or printed roll stock and sheets. Converted to all package sizes up to 36" wide, and available in any desired length:

Kraft-Polythene
Kraft-Foil
Kraft-Saran
Scrim-Vinyl-Foil

Solve your packaging problems with Crystal's reservoir of past experience. A call will bring you immediate assistance.

CTC — CONVERTERS PRINTERS AND DESIGNERS OF TRANSPARENT PACKAGING — T. M. Reg.

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Plants and people

gineering and the promotion of three other officers. Mr. Bedell, who was formerly chief engineer, will be succeeded by **Charles T. Wiedman,** formerly assistant chief engineer. **R. C. Swinck,** who was chief cost accountant, has been appointed assistant treasurer, and **Miss M. L. Hoey** has been named assistant secretary. **R. C. Bliss** of Ann Arbor, Mich., has been elected a member of the board to replace **James T. Libbey,** who has resigned.

Mr. Boochever

S. Paul Boochever, former vice president of Einson-Freeman Co., Inc., is now director of the new Merchandising Display and Specialties Division of the **Gibralter Corrugated Paper Co., Inc.,** North Bergen, N. J. He assumed his duties of formulating the complete plans for the new division in June 1 of this year.

The Crown Cork & Seal Co., Inc., Baltimore, Md., was recently awarded a large contract for the manufacture of 20 mm. guns for the Philadelphia Ordnance District. This is the third such contract awarded the company.

Frank W. Broderick has been named a vice president of **Pioneer Folding Box Co.,** Chicopee, Mass. He will have headquarters in Jersey City, N. J.

The Concord Chemical Co., Moorestown, N. J. has announced the appointment of **M. G. Benedict,** 1817 Grant St., Evanston, Ill., as sales representative in Illinois, Indiana and Wisconsin.

The Dobeckmun Co. has announced two changes in its Cleveland sales department. **Charles A. Campbell** has been transferred to Dobeckmun's Los Angeles branch. **Fraser E. Wilson** has taken over Mr. Campbell's former post in Cleveland.

The board of directors of **The Calvert Lithographing Co.,** Detroit, Mich., has elected **Frank W. Barnard** senior vice president and general manager and **Nelson G. Rudderow** vice president in charge of label sales.

The Stecher-Traung Lithograph Corp., Rochester, N. Y., has installed its 11th four-color offset lithograph press. The new press was put into operation at a special "turning-over" ceremony, which was attended by **George S. Dively,** president of **Harris-Seybold Co.,** maker of the press. The ceremony also marked the 20th an-

The Empress closure and smart label combination make Duraglas stock-mold bottle A-4338 a highly individualized sales package.

MAKE-UP makes the difference!

YOU'LL FIND it's surprisingly inexpensive to give your product sales appeal with expensive looking, but economical stock-mold Duraglas bottles.

Owens-Illinois has more than 1400 different sizes and styles of Duraglas stock-mold bottles to choose from. Our package design specialists at the Duraglas Center can help you create a striking bottle — label — closure combination that's just right for your product.

No matter what the market conditions may be, it doesn't pay to let your package get out of the *habit* of selling.

Duraglas bottles are protectors of quality

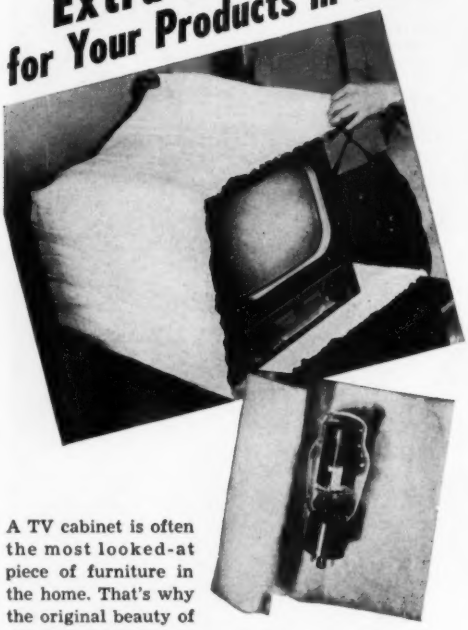
TRADE MARK REG. U.S. PAT. OFF.

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

NOW.... *soft, resilient*

PAD-PAK

Extra Protection for Your Products in Transit



A TV cabinet is often the most looked-at piece of furniture in the home. That's why the original beauty of so many sets is protected from damage in transit by Pad-Pak.

Here is the ideal protective packing. Made of cotton wadding, Pad-Pak has resilience to absorb impact . . . to protect against scratches and rub marks. Glazed outer surface gives extra body, greater ease in handling, and permits accurate cutting to any shape.

But safeguarding cabinets in shipment is only the beginning of a long list of Pad-Pak uses. Any item subject to breakage or marring—from perfume bottles to polished metal parts — reaches its destination undamaged when cushioned with this extra soft, resilient material.

Ask for samples of Pad-Pak, stating your choice of thickness — from ⅛ to ½ inch. Write Dept. M10.

IMMEDIATE DELIVERY

UNION WADDING CO.
Pawtucket, Rhode Island
SINCE 1836

Cut Your Downtime on mill roll changing **to 1 Minute or Less** with the **NEW B&S**

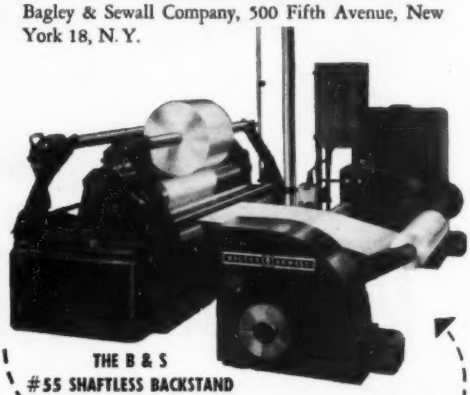
SHAFTLESS BACKSTAND

Money-consuming downtime on mill roll changing is cut to the bone by the wholly automatic B & S Shaftless Backstand. Here is what Mr. C. Carr Sherman, President of H. P. Smith Paper Co., has to say about this equipment:

"The engineering of this new unit indicates a fine understanding of the problems of the users of this type of equipment. The Backstand is much easier to handle as there are no shafts. It is also much easier and faster to make changes on it. I believe that changing rolls with this Backstand can be brought down to well under one half minute."

You may purchase the B & S Shaftless Backstand with or without the new B & S Slitter and Rewinder. The Backstand may be used on any type of rewinding equipment, as well as on waxing and laminating machinery, printing presses, etc.

For full details on the Shaftless Backstand and the new B & S Slitters and Rewinders, write to The Bagley & Sewall Company, 500 Fifth Avenue, New York 18, N. Y.



THE B & S #55 SHAFTLESS BACKSTAND
features automatic tension and side register control; motor for raising and lowering mill roll arms, also motor for moving the arms to accommodate different width rolls. Entire working mechanism is totally enclosed.

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Plants and people

niversary of the purchase of the first four-color offset lithographic press by the Traung Label & Lithograph Co., which later merged with the Stecher Lithographic Co. to form the Stecher-Traung Lithographic Corp. The huge new press is the 100th four-color offset lithographic press manufactured by Harris-Seybold.

The Aluminum Co. of America is expanding its research facilities with the erection of a new building at the company's Aluminum Research Laboratories at New Kensington, Pa. The new unit will increase total floor space at the laboratories by about one-third. Construction is now under way and the building will be ready for occupancy early next year.

Plans for increasing the nation's alumina-producing capacity by 180,000 tons annually through the addition of new production facilities at an existing plant in Mobile, Ala., have been announced by the **Aluminum Ore Co.**, an Alcoa subsidiary.

The H. L. Large Corp., paper distributors, have moved their offices and warehouse to 58 Jericho Turnpike E., Mineola, N. Y.

Milprint, Inc., producers of flexible packaging, have opened a new sales office at Des Moines, Iowa. **Walter Hullinger,** who has represented Milprint in Iowa and lower Minnesota, will head the new office, located at 1201 Paramount Bldg.

R. F. Freebody has established his own business at 2 Reihl St., East Paterson, N. J., as a representative for materials-handling and packaging equipment. Mr. Freebody is now handling the Clybourn Machine Co.'s CMC carton filling and sealing machines, the Stuyvesant Engineering Co.'s Fillmaster volumetric filling machines, the Counsel Machine Co.'s Robo-Lift elevating conveyors, the Transparent Wrap Machine Corp.'s Transwrap machines, The P.N.R. Corp.'s Oto-Pak bag maker and Packaging Industries' bag-sealing equipment. Mr. Freebody's territory includes New York State, New Jersey, Connecticut and Pennsylvania.

Glenn Sensiba, general manager of the **Sigmund Ullman Co., Midwest, Division** of **Sun Chemical Corp.,** died on Aug. 18 after a long illness. Mr. Sensiba, who has been with the Sigmund Ullman Co. for 45 years, was also a director of the Kable Printing Co. of Mt. Morris, Ill.

TRANSWRAP

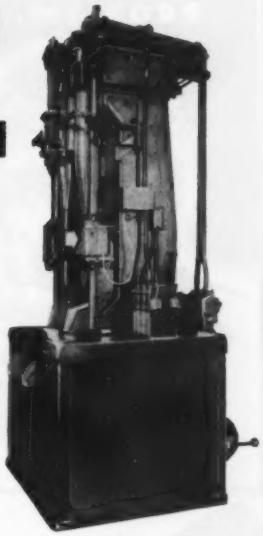
POWDERS TABLETS FREE FLOWING SOLIDS LIQUIDS OR SEMI-LIQUIDS

package your liquid products automatically at lower cost!

✓ lower initial costs
✓ lower operating costs
✓ lower maintenance costs

Leading, nationally known packagers have installed Transwrap liquid feed machines—for their (1) simplicity, (2) three-way economy, and (3) versatility. Their records prove high labor savings—one machine equals the output of fifteen to eighteen hand operators; plus additional savings on eliminating the purchase of ready-made bags. "Downtime" is practically eliminated; repairs are negligible.

Transwrap liquid feed machines offer you the full advantage of automatic, hi-speed packaging of a limitless variety of liquid and semi-liquid products — in the food, drug, chemical and other processing fields. Just to name a few . . . catsup, salad dressing, mustard, sauces, horse-radish, flavoring agents, oleomargarine, cheese, preserves, jams, paints, extracts, liquid chemicals and pharmaceuticals.



LIQUID FEED UNIT, SHOWN—designed to package all types of liquids and semi-liquids. Output 40 to 120 per min.—5 cu. in. to 80 cu. in.; pillow or fin-seal pkgs., all heat-sealing materials, sizes—1-13/16" x 3" to 5¼" x 13". Pressure feed by positive displacement piston type pump, or small Bosch-type pump. 4' x 5' x 8'; 2150 lbs.; ¾ h.p. motors, 1600 w.

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Need Help? Transwrap's engineering staff will be glad to assist you in analyzing your packaging requirements . . . make specific recommendations designed to improve your production—at lower costs.

Naturally, there is no obligation for this consultation service. Just check the coupon below.

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...EQUIPMENT?

...COMPLETE PLANT?

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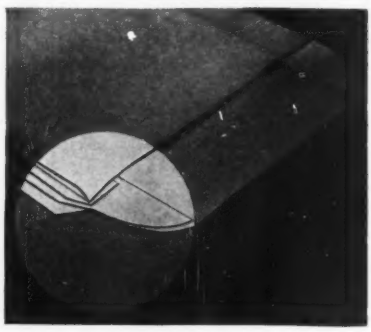
armor-edge mailers

If protection for your mailings of flat printed matter or merchandise is what you're after, Andrews Armor-Edge Mailers* will do the trick . . . at lower cost and with less handling than ordinary heavy protective wraps.

Extensive use by companies doing large volume mailings reveals that Armor-Edge Mailers almost entirely eliminate mail damage.

Armor-Edge Mailers are not stock items. To give proper protection, sizes and flap styles must be designed to order. Why not ask for samples today. Then you'll be able to judge their merits yourself.



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for magazines
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for flat packages of every sort

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The present limited supply of paper may prevent us form serving you immediately. However, all inquiries will be given attention in order of their receipt.

"Don't you have a box of Oboy Oats with number 12 F-80 Shooting Star cutout?"

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Must be psychic . . . or something!

The *New Yorker* cartoonist, George Price, must have extra-sensory perception . . . or a relative who works for one of our customers!

At the time his cartoon ran, we were making a series of model planes for a cereal manufacturer. Not obsolete types, such as the F-80, but new Air Force hot jobs, actually flyable! Each is lithographed on a card, diecut for pressing out, scored for folding, can be assembled without glue or pins.

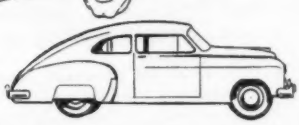
In the last two years Einson-Freeman has made paper premiums . . . planes, animated dolls, masks, badges, trading cards, toy automobiles—for both low priced consumer products, and for high priced major appliances.

These paper toys are planned in series, provide a sustained attraction. They have enormous appeal and interest for children . . . and persuade parents to change brands, try new products, or call at stores for demonstrations . . . They have been outstandingly successful for many national advertisers.

These paper premiums are devised, formulated and fabricated by EF's Sam Gold—an engineer with imagination that interests juveniles, and a sales sense that moves goods.

His paper productions arouse new interest in old products, and new interest in new prospects . . . draw audiences for windows, make traffic for stores, find customers for salesmen—for everything from cereals to Chevrolets. Sam Gold, incidentally, has been newsworthy enough for a LIFE article.

Mr. Gold is a vice president of Einson-Freeman . . . and his talents, and experience in sales promotion are at your service . . . Phone, wire, or write for successful instances of premium sales ideas!



Einson-Freeman Co., Inc.

Lithographers who make paper make sales!

Starr & Borden Avenues, Long Island City, New York

For your information

The formation of Joint Committees with other organizations has been authorized by the **Packaging Institute's** board of directors. They pointed out that men who are members of one of the P. I. Technical Committees are often members of a committee in another organization having the same objectives. A case in point that was cited is TAPPI and the Institute, where substantially the same men would be working on the same tests in the two different associations. Findings of a Joint Committee shall not be binding on the Institute, but presumably will be accepted. **Dr. L. E. Simerl** of Marathon Corp. is chairman of the Joint PI-TAPPI Packaging Materials Committee.

Exploratory meetings have been held by three new technical committees authorized by the Technical Operations Committee of the Packaging Institute. The three new committees, requested by members, are: Adhesives, Equipment Packaging, Export Packing and Packaging. Chairman of the Adhesives Committee is **Miss Maurine Ponder,** in charge of research on packaging materials and former assistant superintendent of bottling for Joseph E. Seagram & Sons, Inc. The new Steering Committee on Export Packaging includes **M. J. Odell** of Dewey & Almy Chemical Co., chairman; **Robert de S. Couch,** General Foods Corp.; **H. Earl Nack,** Sharp & Dohme, Inc.; **John A. Warren,** American Home Products Corp. Acting chairman of the new Equipment Committee is **R. D. Courtright** of International Business Machines Corp.

The Packaging Assn. of Canada will hold its First Annual Conference on Nov. 7-8 at the King Edward Hotel in Toronto. The program will include four sessions, during which 17 packaging authorities are scheduled to speak.

The Glassine & Greaseproof Mfrs. Assn. received an Award of Merit of the **American Trade Assn. Executives** during the ATAE annual meeting in Chicago last month. The award was presented to **Thomas J. Burke,** secretary-treasurer of the Glassine and Greaseproof association. The citation was awarded for the association's "excellent services to its industry and the public and especially for its work in gathering statistical data" which resulted in "the founding of an accounting and cost procedure system for the guidance of its members."

More than 400 exhibits will be shown at the **23rd Exposition of Chemical Industries,** to be held at Grand Central Palace, New York, Nov. 26 to Dec. 1, filling all four floors of the building to capacity. The exposition will reflect the great industrial expansion in the industries dependent upon chemistry or the application and use of chemical products.

The Freund Instrument Laboratory at the Illinois Institute of Technology, named in memory of **Erwin O. Freund,** founder of the **Visking Corp.,** Chicago, was dedicated on Sept. 28. A plaque was placed in the laboratory in a short, informal ceremony attended by Mr. Freund's widow and son. The Visking Corp. has contributed to the support of Illinois Tech for a number of years and the Freund Foundation also provides an annual fellowship and a scholarship.

The Reynolds Metals Co. has recently revised its full-color, 16-mm. sound film, "Pigs and Progress," bringing it up to date with the rapidly advancing uses for aluminum. The picture presents in simple language a complete non-technical story of aluminum, beginning with the mining of bauxite through the mill operations. Aluminum foil is shown rolling from new high-speed mills at Reynolds. Production of aluminum pigment, designed for use in paints and other protective coatings, is shown. Prints of the picture with sound track are available for loan without charge. To obtain bookings, write Motion Picture Department, Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.

Of value to both shippers and carriers is a new booklet published by the **Motor Truck Assn. of California** entitled "Motor Carrier Packaging and Inspection." A chapter is devoted to each type of packaging, pointing out the particular advantages and disadvantages of each and telling what causes 90% of breakage and how to spot the trouble. The booklet is illustrated with photographs, drawings and cartoons, and is written in non-technical language. Copies may be obtained by writing the association, 2800 S. Alameda St., Los Angeles 58, Calif. Single copies cost $2.40, with discounts for more than 10 copies.

Plans are being finalized for the fourth **Western Packaging and Materials Handling Exposition,** to be held in Los Angeles in the fall of 1952, it is announced by **Clapp & Poliak, Inc.,** exposition management firm that founded the show in 1948. The company predicts that the 1952 exposition will be the largest of its kind ever held in the West. The exact dates will be announced soon, upon completion of negotiations for the exhibition hall and for necessary hotel accommodations for exhibitors and visitors.

Minnesota Mining & Mfg. Co. has published a revised catalog listing 21 "Scotch" brand pressure-sensitive tapes that meet Government requirements for packaging, masking and other industrial jobs. The catalog covers 11 official Government specifications and 25 sub-sections, showing the corresponding tapes. Request copies of the catalog from 3-M, 900 Fauquier St., St. Paul 6, Minn.

The Eighth Annual National Technical Conference of the **Society of Plastics Engineers, Inc.,** will be held Jan. 16-18, 1952, at the Edgewater Beach Hotel, Chicago. "Plastic Horizons" will be the

What's Doing

Oct. 5-7—**Society of Industrial Designers,** Sixth Annual National Convention, Moraine Hotel, Chicago.

Oct. 13-17—**Packaging Machinery Mfrs. Institute,** Mid Pines Club, Southern Pines, N. C.

Oct. 14-16—**Small Brewers Assn.,** Chicago.

Oct. 14-18—**American Bakers Assn.,** annual convention, Hotel Sherman, Chicago.

Oct. 17-19—**Label Mfrs. Nat'l Assn.,** Edgewater Beach Hotel, Chicago.

Oct. 22-23—**American Butter Institute,** annual convention, Drake Hotel, Chicago.

Oct. 22-24—**Packaging Institute, Inc.,** 13th Annual Forum, Commodore Hotel, New York.

Oct. 22-24—**Internat'l Assn. of Ice Cream Mfrs.,** 49th annual meeting, Cadillac Hotel, Detroit.

Oct. 24-26—**National Pickle Packers Assn.,** annual meeting, Chicago.

Oct. 29-31—**Nat'l Paint, Varnish & Lacquer Assn., Inc.,** Chalfonte-Haddon Hall, Atlantic City, N. J.

Nov. 1-2—**Industrial Management Society,** 15th Annual Time & Motion Study and Management Clinic, Sheraton Hotel Chicago.

Nov. 7-8—**Packaging Assn. of Canada,** First Annual Conference, King Edward Hotel, Toronto, Canada.

Nov. 8-11—**Nat'l Barrel & Drum Assn.,** Statler Hotel, New York.

Nov. 12-14—**Nat'l Licensed Beverage Assn.,** Bellevue-Stratford, Philadelphia.

Nov. 12-15—**Nat'l Automatic Merchandising Assn.,** Chicago.

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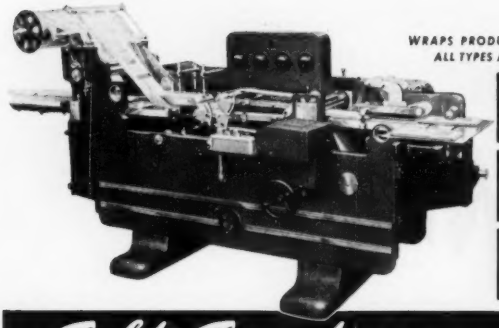

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Continuous feed wrapping seals flavor-freshness in...Keeps Moisture in or out!

Cakes, Cookies, Crackers and many other food products reach a new high in packaging production with the revolutionary Campbell Wrapper. It more than doubles the speed of many wrappers and saves time, labor and money with fewer operators — less materials. "Float" wrapping with longitudinal heat or glue sealing and ends flared, crimped or folded guarantees product protection equal to the wrapper itself. Uses all types of packaging materials and accurately registers printed names and designs. Available in Straight, L, or any Custom type feed required. Write for complete information and brochure.

up to 120 units PER MINUTE!

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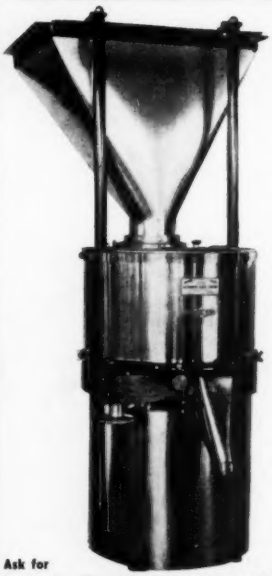

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GRAMS OUNCES

With this Model A PAK KING filler you meter the above volumes accurately and at high speed. Spices, coffees, teas, grated cheese, cocoas, drugs, powders, insecticides and chemicals. In semi or full automatic dust free designs up to 120 per minute or more. Loose, settling or ram pressure fill. Tandem fillers for high speed or extra settling features as required for powdered sugar cartons.

Ask for Catalog No. 48 or Bulletin No. 481 and 482.

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WEIGH RIGHT AUTOMATIC SCALE COMPANY
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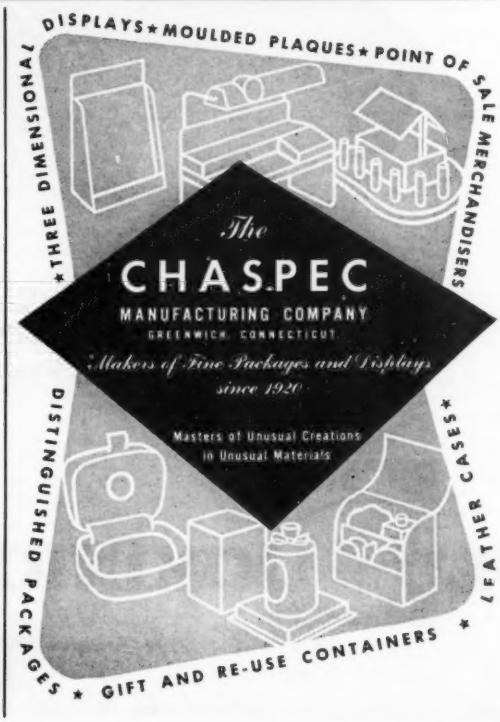

For your information

theme for the conference and papers will be presented on the role of plastics in our present economy.

R. Bruce Miller has been elected chairman of the **Packaging Committee of The Maritime Assn. of the Port of New York,** succeeding **James B. Young.** Mr. Miller is assistant vice president of the Insurance Co. of North America, Philadelphia. Other members of the committee were re-elected. The committee is sending questionnaires to steamship and insurance companies, requesting information on claims trends with the object of determining those problems of cargo-loss prevention that appear most worthy of study. Carriers and underwriters have also been invited to suggest any special problems within the committee's scope with respect to imports and exports. The committee also plans to invite shipper trade associations to cooperate in submitting packaging or related problems on which they desire the assistance of the committee.

The annual meeting of the **Central Division, National Paper Box Mfrs. Assn.** was held at Shawnee Inn, Shawnee-on-the-Delaware, Pa., Sept. 13-16. Those addressing the meeting included **Douglas T. Neale** of Edwin J. Schoettle Co., president of the association; **Milton Milestone** of Acme Paper Box Co.; **Walter W. Matthews** of the Philadelphia Safety Council; **Harold K. Reifsnyder** of High Production Machine Co.; **Claude W. Waters** of Cardinal Boxes, Inc.; **Walter P. Miller, Jr.,** of Walter P. Miller Co.; **Casimir A. Seinkiewicz** of Central-Penn National Bank and **Vice Admiral E. Dorsey Foster,** USN.

An **International Symposium on the Fundamental Chemistry of Cellulose and Lignin,** organized by the **Pulp and Paper Research Institute of Canada** at McGill University, was held in Montreal, Canada, Sept. 24-26. Assisting in sponsoring the event, one of the outstanding scientific functions of the year in Canada, were the **Chemical Institute of Canada, the National Research Council, the Technical Section of the Canadian Pulp & Paper Assn., Industrial Cellulose Research Limited** and a number of companies in the pulp and paper and allied fields. Attending the symposium were 26 outstanding foreign chemists representing 13 nations. Speakers included **Dr. W. E. Cohen** of Australia, **Dr. L. Jorgensen** of Sweden, **Dr. J. K. N. Jones** of England, **Dr. Herman Mark** of the United States, **Prof. Carl Freudenberg** of Germany and **Prof. C. B. Purves** of Canada.

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FREE for the asking. With the ever-tightening of critical materials, it will pay you to practice conservation now more than ever. Heavy demands for WRAP-DRI Waterproof Papers by industry for protecting military and civilian products in storage or transit, makes it most important that wastefulness be retarded — your inventory supplies, stretched to the limit. Not only do you cut wrapping costs — you also curtail the need for using inferior substitute wrappers that protect *less* and often result in profit-eating returns of damaged products. To assist your conservation campaign, we offer this timely wall-hanger message which serves as a constant reminder in your packing and shipping departments. Your request will bring your needed quantity.

You'll want this handy pamphlet, too

It explains in more detail how to handle and store WRAP-DRI Waterproof Papers to get the most from them. Handy for use in smaller spaces such as desk tops and bulletin boards. FREE for the asking — any quantity you need for branch plants, etc.

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Functional Papers FOR PROTECTION THAT COUNTS!

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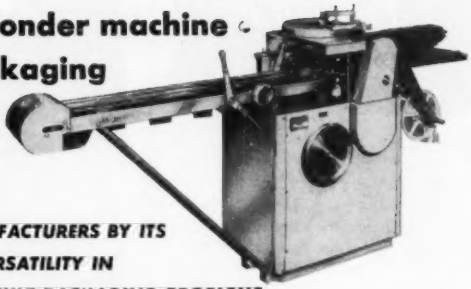
the Wonder machine of Packaging



AMAZES MANUFACTURERS BY ITS SCOPE AND VERSATILITY IN SOLVING DIFFICULT PACKAGING PROBLEMS

It wraps anything . . . round, disc shaped, oblong, oval, rectangular, whether it be . . . soft, sticky, hard or fragile . . . that can't be wrapped on an ordinary machine or has to be hand wrapped.

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KIMBLE GLASS TOLEDO 1, OHIO

Division of Owens-Illinois Glass Company

Washington review

NPA now has can production scheduled on a 12-month basis to provide greater flexibility in the highly seasonable can industry. NPA plans to allocate about 4.2 million tons of steel for can production during the 12-month period, Oct., 1951, to Oct., 1952, an amount greater than the industry has used in any previous 12-month period.

In an amendment to Can Order M-25, NPA has established three groups according to use of cans by canners.

Group I includes perishable foods and certain highly essential non-food products. Can use is unlimited for most products in this group.

Group II includes such food items as coffee, baking powder, anti-freeze, motor oils, paints and ointments. Can use is limited to 90% of the base-period consumption.

Group III includes cans for beer, window sprays, shoe polish, cleaning fluid and similar items. Canners of these items are permitted 70% of base-period use.

The previous requirement that you must choose as your base period the calendar year 1949 or 1950 is continued. This selection must be used in computations for the fourth quarter this year through the third quarter of 1952.

Companies that can several products may not exceed the percentage permitted for one product by switching cans to it from another use. You may, however, use any product quota remaining from previous quarters for that product in the fourth quarter.

Use of tinplate waste, terneplate waste and blackplate rejects is unlimited. Can parts or cans made entirely from these materials do not have to be charged against quotas.

Aluminum foil cans

A new aluminum foil-plastic can developed by the Reynolds Metals Co. has created an unusual stir of interest not only because of its potential importance in freeing us from dependence on foreign sources of container-vital tin, but also because of the way it was announced.

The new container material is fabricated by coating a roll of aluminum with plastic in a continuous process. The can body is formed from the foil-plastic material on a mandrel and is then cut to desired length and is ready to have foil-plastic tops and bottoms applied. A variety of plastics can be used to provide various packaging characteristics. Machinery for making the containers can be installed at the packer's plant.

W. Stuart Symington, director of the Reconstruction Finance Corp., showed the new container to reporters at a recent press conference—somewhat to the surprise, it is said, of the Reynolds official who supplied the model container.

The RFC, sole buyer of tin for commercial use in this country, must have enjoyed the "bearish" feelings its announcement provoked in tin-marketing circles. With tin prices soaring more than 500% during the first post-Korean months, the RFC has had no other news that would penetrate to "tin" ears.

Opportune as the new container may be, however, it must be realized that aluminum itself is a critical defense material. The immediate future for the new container, for this reason if no other, would appear to be obscure. On the other hand, with primary aluminum production expected to be double in 1954 what it was in 1950, the long-range possibilities may be optimistic. Also, it is pointed out that the foil-plastic containers have scrap value, since the aluminum content can be reclaimed by melting down the cans.

The Reynolds company says that manufacture of the foil-plastic container material will start immediately, but the current output will be used to fill armed forces' requirements. Reynolds also has under development an "aluminized steel" process for making cans. In this process, inner and outer coatings of aluminum foil are welded by heat and pressure to a sheet of steel.

Conservation for glass

Conservation to stretch existing supplies of scarce materials is a subject that will be receiving increased attention.

Reduced use of selenium in the manufacture of glass containers, for example, may be necessary to help conserve the supply of this copper-smelting co-product, which is important in producing glass, stainless steels, rubber and other items.

The Glass Container Manufacturers Industry Advisory Committee has recommended reduced use of selenium, demand for which now exceeds supply by nearly 50%.

Scrap campaign

Scrap-collecting campaigns similar to those employed during World War II are about to return. It is predicted that millions of tons of additional iron and steel scrap will be needed if mills are to meet scheduled production records. One of the campaigns will call for housewives to save metal cans for Boy Scout collectors. Officials of the scrap program hope to recover a million tons of scrap a year by collecting old cans.

CMP tightens

There are indications that provisions for tightening the operation of the Controlled Materials Plan will cause the economy to take on increasing aspects of wartime during the fourth quarter.

As previously announced, a 100% CMP for steel, copper and aluminum went into effect Oct. 1. During the third quarter, consumer durable goods production was covered only by quota regulations, not by CMP, but the continuing gap between supply and needs ended all hope that an open-end CMP could be maintained.

On less-essential consumer durable items, CMP ceilings will be 58% of the base period as compared with a third-quarter permitted consumption amounting to 70%. The base period is either last-half 1949 or first-half 1950. Essential items will receive allotments ranging up to 100% of the base period.

NPA is intensifying its compliance drive by organizing "flying squadrons" to investigate willful violations.

Manly Fleischmann, DPA-NPA administrator, has urged all manufacturers to cancel or adjust outstanding orders that exceed quarterly CMP allotments.

Duplicate orders with more than one supplier are prohibited, even though you may intend to cancel one order when another is accepted.

You are also forbidden to place orders for delivery in a single month of more than 40% of the quarterly allotment.

Much of the difficulty experienced with CMP in the third quarter was attributed to violations. NPA insists there is sufficient material to match allotments.

Defense contracting

Small business firms desiring to convert operations to military output will find interesting a new pamphlet "Converting to Military Production," issued by NPA. The pamphlet tells steps to take in obtaining Government prime contracts for defense items. As suggested in the pamphlet, it is advisable that manufacturers start planning now for items they might manufacture in the event of full mobilization.

Sulphur

Discovery in Louisiana of a large new deposit of brimstone should help end the shortage of sulphur by 1953, according to a Government official. The sulphur shortage has caused packagers concern, because it is important in the manufacture of cellophane. Sulphur supplies in the fourth quarter may fall 100,000 tons short of demand.

SMALL RIGID CONTAINERS

made of

STYRON

There's a multitude of big packaging advantages in these little rigid containers made of Styron (Dow polystyrene). Crystal clear, or in gem-like colors, Styron provides both durable protection and attractive display for any product!

Whether you package pharmaceuticals or small machine parts in rigid containers made of Styron, you'll appreciate their low-cost protection against costly damage from deterioration, handling and breakage. Moreover, their light weight reduces shipping costs . . . and their sparkling eye-appeal and re-use value boost sales.

Handsome rigid containers made of Styron offer you complete design freedom. Qualified molders can meet your specific requirements for civilian or defense packaging, or you can select a suitable container from a wide variety of low-cost standard sizes and shapes. Write Dow today for detailed information.

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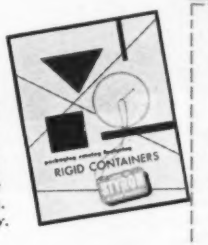
There are sizes and shapes to meet every packaging need in Dow's latest packaging catalog featuring rigid containers made of Styron. Send for it today.



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The manufacturer who uses Continental low-pressure cans today can get them equipped with Continental's exclusive built-in "finger-tip" valve (right). Or he can fit them with his own special valve (left).

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Continental Can has 65 plants in the United States, Canada and Cuba, 17 field research laboratories and 63 sales offices.

Pss-sst

Have you heard how Continental developed the popular low-pressure aerosol can-and-valve?

Originally all aerosol products were packed in heavy steel "bombs." These are pretty good—but they can't help being expensive. So Continental research people said:

"Why don't we find a way to put these efficient aerosols in an inexpensive, disposable can? Then more people could afford the convenience of self-spraying insecticides, deodorants, paints, waxes and other products."

Our scientists went to work. They soon discovered it wasn't necessary to use aerosol "propellants" that developed high pressures—around 70 lbs. per square inch. A pressure of 35 lbs. worked just as well for many sprays, and didn't require a heavy steel "bomb" structure for the package.

So Continental researchers developed a proper combination of materials to give a satisfactory *low-pressure* aerosol. Next they tackled the problem of the container itself. Because of their experience with other cans designed to hold pressure, they knew just what kind of can to build.

But the valve for a low-pressure aerosol presented a brand-new problem—and without the proper valve, the whole idea might have flopped. After several years of intensive research, the engineers came up with the answer—the built-in "finger-tip" valve.

Presto—the Continental pressure aerosol can was a practical reality, and in just a few months it appeared in stores all over the country, packed with dozens of convenient, useful products.

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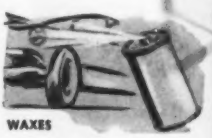
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(This advertisement originally appeared in full-color in TIME, BUSINESS WEEK and FORTUNE.)

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FIBRE DRUMS

PAPER CONTAINERS

STEEL PAILS AND DRUMS

CAPS AND CORK

PLASTIC PRODUCTS

DECOWARE

U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted. **Edited by H. A. Levey**

Frozen Food Container, D. G. Magill and R. P. Bigger (to American Can Co., New York, N. Y.). U.S. 2,561,391, July 24. A semi-rigid container for frozen foods, comprising a tubular flexible body of rectangular cross section having substantially smooth side and end walls set off by rounded corners, end walls being substantially flat throughout their extent and a countersunk metal end member secured to each end of body in end seam.

Filling and Closing Machine With Can and Cover Handling Devices, R. E. J. Nordquist (to American Can Co., New York, N. Y.). U.S. 2,561,404, July 24. In a machine for conveying containers and container covers through a sterilizing chamber as a feature in positioning a sterilized cover onto a filled sterilized container in a sterile chamber incident to sealing, the combination of a sterilizing chamber having a sterile atmosphere, a pair of cover guide tracks located within sterilizing chamber for guiding the covers along a predetermined path of travel in an inverted position.

Bag-Opening Machine With Upper and Lower Bag-Forming Units Disposed in Parallel Relationship, J. F. Peters (to American Can Co., New York, N. Y.). U.S. 2,561,410, July 24. In a machine for opening bags and the like and for holding them in position for filling with articles, the combination of a frame, a pair of parallel lower bag-opening units mounted in said frame and having bottom wall members disposed in parallel overlapping relation and movable relative to each other.

Box-Making Machine, G. S. Sillars (to Hoague-Sprague Corp., Lynn, Mass.). U.S. 2,561,485, July 24. In a box-making machine, relatively movable press members engageable with the inner and outer faces of the end of a partially formed box, power-operated mechanism for moving one of said press members toward the other to apply pressure to said faces and a trigger adjacent to press members for initiating operation of mechanism.

Container Nestable and Contractible Pouring Spout, I. H. Rieke (to Rieke Metal Products Corp., Auburn, Ind.). U.S. 2,561,596, July 24. A pouring spout comprising a tubular body diminishing in diameter from a larger end to a smaller end and open at its larger end, an intermediate formation dividing larger end from smaller end to provide inner and outer portions, respectively, the material forming the wall of the larger end portion being sufficiently flexible to roll upon itself axially to a position wherein the smaller end portion is wholly disposed inwardly of the larger end and nested within larger end portion.

Automatic Carton-Erecting Machine, L. Benoit and R. Vahle (to Robert Gair Co., Inc., New York, N. Y.). U.S. 2,561,776, July 24. In a machine for erecting cellular cartons, each comprising two foldable blanks having flaps hinged along one edge and extensible at right angles to said edge within the other to form cross walls, means holding the blanks horizontally at opposite sides of the machine with flaps extending inwardly and for advancing them oppositely together.

Shipping Container Cover Lock, W. C. George (to Gaylord Container Corp., St. Louis, Mo.). U.S. 2,561,979, July 24. A box bottom member having an upright side wall, a tab on and projecting upwardly above wall and having a reduced neck portion, a box top member having a downturned side flange adapted to overlie side wall when the box is closed, top member having a slot therethrough adjacent said flange and through which tab may be inserted and bent outwardly and downwardly to lie against the exterior of said flange.

Art of Radiant Heat Sealing, P. B. Hultkrans (to Milprint, Inc., Milwaukee, Wis.). U.S. 2,562,146, July 24. The method of forming polygonal flat bags from sheets of heat-sealable material, which comprises stacking the sheets upon each other in pairs with a sheet of non-heat-sealable material between successive pairs and thereafter simultaneously heat sealing all but one edge of each pair of sheets by advancing the stack through a heating zone having the source of heat spaced from edges.

Collapsible Cellular Carton, K. T. Buttery (to Sutherland Paper Co., Kalamazoo, Mich.). U.S. 2,562,233, July 31. A collapsible carton comprising side walls, bottom members hingedly joined to the lower edges of walls, longitudinal partition members hingedly joined to the inner edges of bottom members and adhesively secured together in side-by-side relation.

Container, W. LaVern Collins (to Morris Paper Mills, Chicago, Ill.). U.S. 2,562,261, July 31. In a paperboard container characterized by a pair of oppositely disposed flaps which are adapted to be folded with their end portions in overlapping relation, said end portions being defined by side edges converging toward each other and terminating in end tab formations, the tab formations defining outwardly opening generally V-shaped slots whereby said flaps may be interengaged to prevent movement away from each other in one direction and a cut-out tongue formation in the inner edges defining said V-shaped slots adapted to be sprung over into locking engagement with the adjacent side edge of the opposed flap to prevent movement of the flaps laterally of each other.

Bag and Method, T. E. Piazze (to Shellmar Products Corp., Mt. Vernon, Ohio). U.S. 2,562,389, July 31. In a bag formed from a single web of heat-sealable material into a tubular wall forming body having a single longitudinal seam provided by opposite marginal portions of web being sealed to each other and in which one wall of tube has a closure flap extending beyond an open end of the tube.

Closure Cap and Package, R. C. Hanson (to Anchor Hocking Glass Corp., Lancaster, Ohio). U.S. 2,562,548, July 31. A container closure of the type adapted to be applied to a container to form a seal against a side wall thereof without reformation of the closure skirt, comprising a cover portion, a depending skirt having a substantially smooth and uninterrupted uppor portion and a lower portion of greater diameter than the upper.

Method of Applying End Closure to Containers, B. A. Ringler (to Gardner Board & Carton Co., a corporation of Ohio). U.S. 2,562,579, July 31. A process of forming a hermetically sealed polygonal paperboard container which comprises providing an open-ended polygonal tubular body of fibrous material having body walls in articulation, end portions of said body walls being of double thickness and presenting at one end folded coplanar edges and a closure therefor.

Means for Packaging Articles for Handling, A. P. D. Belanger (to Alton Box Board Co., Alton, Ill.). U.S. 2,562,655, July 31. Packaging means comprising a plurality of holders each formed from a blank of tough, stiff sheet material folded into the shape of a cup having a transverse panel, a plurality of side wall panels in angular relationship to each other and inwardly extending triangularly shaped tabs at the corners of the holder.

Apparatus for Waxing Collapsible Tubes, D. J. Palermo (to Victor Industries Corp., Brooklyn, N. Y.). U.S. 2,562,871, July 31. In an apparatus for waxing the interior of a collapsible tube having a constricted hollow neck and a tapered shoulder, a vertically movable wax sprayer adapted to support a tube and to spray a stream of molten wax into the neck and shoulder of the tube.

Bottle Carrier, C. S. Price (to Reynolds Metals Co., Richmond, Va.). U.S. 2,563,065, Aug. 7. A bottle carrier adapted to be quickly set up and comprising a blank of resilient sheet material shaped, creased and bent to provide, when set up, a bottom panel, side panels each formed with bottle-receiving apertures, which panels convergingly slope straight up from the opposite side edges of bottom panel of longitudinal medial plane of the carrier and connected to provide a lifting portion.

Tear-Off Cap, M. M. Kline Dundalk, Md. (50% to C. Gigliotti, Dundalk, Md.). U.S. 2,563,176, Aug. 7. A cap for a bottle comprising a sealing skirt crimped to the neck of the bottle, an inner shell and gasket assembly between the ring and the bottle neck, said ring having a tearing-off element comprising a tongue portion with a pair of arcuate wings on each side of the tongue portion and a hinge in the area of the tearing of the skirt.

Method and Machine for Packaging Adhesive Strips, L. L. Salfisberg (to Ivers-

For reliable glass
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Glass engineers at Armstrong are old hands at producing quality ware. From tiny dropper bottles to large food jars, this ability has resulted in dependable performance (and greater sales appeal) of the finished containers. Perhaps your present bottle or jar is causing inefficiencies in the performance of the filling line or possibly it lacks a quality needed in the field. If so, ask your Armstrong representative about our glass or write to Armstrong Cork Company, Glass and Closure Division, 2310 Prince Street, Lancaster, Pennsylvania.

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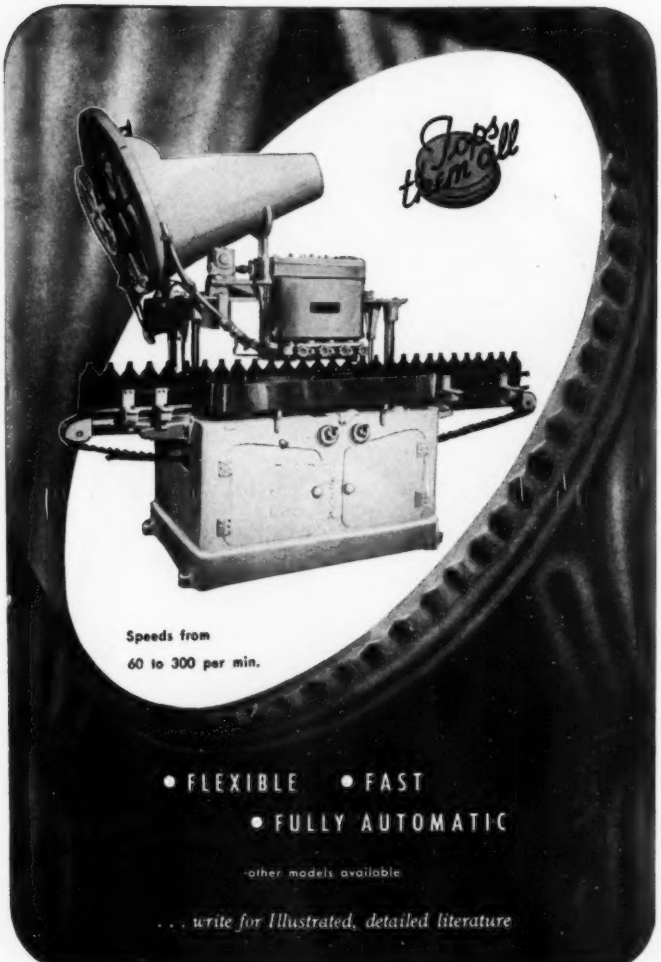
the fastest screw-capping machine on the market—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. . . write for Illustrated, detailed literature

RESINA AUTOMATIC MACHINERY CO., INC.
BROOKLYN 31, N. Y.

U.S. patents digest

Lee Co., Newark, N. J.). U.S. 2,563,071, Aug. 7. In a method of packaging pieces of material that have a layer of a normally tacky adhesive composition on one side thereof and a perforate sheet overlying and temporarily secured to adhesive composition to prevent accidental adhesion to surfaces which it may contact, the step of pressing side of each piece of material against one side of a layer of packaging material and squeezing adhesive composition through said perforate sheets.

Straw Packaging Machine, S. A. Franco (to Diamond Straw & Machine Corp., New York, N. Y.). U.S. 2,563,404, Aug. 7. In a machine for packaging drinking straws having means for continuously feeding a paper tube axially, the combination of scissors having normally yieldingly closed, pivoted cutting blades provided with followers positioned remote from said blades.

Container, D. P. Anschicks (to The Protectoseal Co., Chicago, Ill.). U.S. 2,563,508, Aug. 7. In a safety container for storing, handling and transporting liquids comprising in combination a glass bottle, a sponge-rubber cover completely enclosing same and a plastic outer covering bonded to and enclosing the sponge rubber.

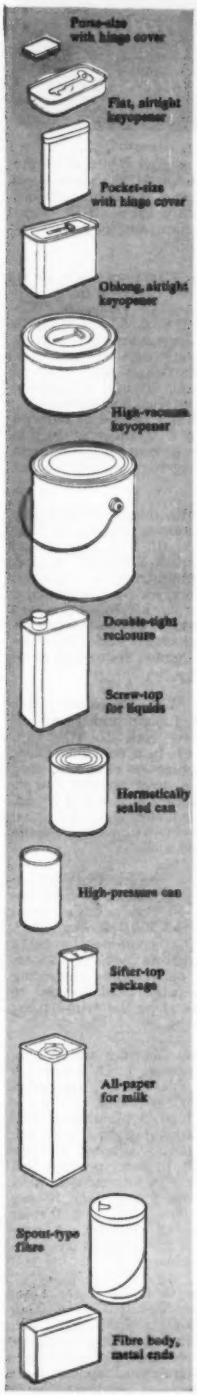
Sealing Container, S. F. Mackelduff (to The Lake Laboratories Co., Inc., Philadelphia, Pa.). U.S. 2,563,542, Aug. 7. Means for supporting a sealing tape roll with the sealing tape maintained under predetermined tension and means of detachably securing containers on table including a stationary jaw member.

Paperboard Carton Capable of Holding Liquids, W. A. Ringler (to The Gardner Board & Carton Co., a corporation of Ohio). U.S. 2,563,619, Aug. 7. A carton comprising a tubular body rectangular in cross section and having body wall in articulation with each other, four integral end-closure flaps articulated to the end of said body walls and interconnected to each other along fold lines extending throughout their common lengths.

Automatically Partitioned Carrier Device, W. A. Ringler (to The Gardner Board & Carton Co., a corporation of Ohio). U.S. 2,563,620, Aug. 7. In a bottle-carrier structure of knock-down character, a band portion having side and end walls in articulation and collapsible upon median score lines in the end walls, loop portion comprising extensions connected, respectively, to the bottom edges of said walls, said loop being scored to provide bottom forming portions and a double thickness central partition.

Method of Forming Rounded-Bottom Conical Paper Cups, W. F. Amberg (to Lily-Tulip Cup Corp., a corporation of Delaware). U.S. 2,563,633, Aug. 7. The method of forming a spoon serviceable bottom in a conical paper cup of less than 60 deg. angle comprising progressively circumferentially gathering and pleating the paper of an appreciable por-

WHICH PACKAGE
SUITS YOUR PRODUCT?



Vacuum-packing Blood Plasma Apparatus. After putting medical apparatus for administering blood plasma in special Canco containers, the pharmaceutical technician uses the machine shown to vacuumize and seal hermetically the entire unit.

Getting it there was the problem

THE CALL WENT OUT for blood. From the Orient . . . from Europe . . . from military posts in Iceland . . . Australia . . . Alaska. From American ships in the Atlantic . . . the Pacific . . . on the seas everywhere.

There was plenty of blood plasma—*at pharmaceutical houses in this country*. It was in glass containers. The apparatus for administering it was also of glass.

The problem was to get these units safely packaged for their long trek to all parts of the world.

The packages had to be strong enough to protect the delicate apparatus against rough handling of any type. From a medical point of view the hermetic seal had to be perfect. And the packages must be able to be opened quickly for emergency use.

At this point Canco's "know-how" took over.

With characteristic ingenuity Canco developed this special, tall, key-opening vacuum container for this important use.

The case of the blood plasma container is another instance of how Canco has pioneered and developed *hundreds* of containers. And, Canco's 50 years of accumulated knowledge and resourcefulness will continue to help its customers meet the unusual problems brought about by the National Emergency.

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Spiral Wound PAPER TUBES and CONTAINERS

DIAMOND TUBES and Containers—the efficient and economical answer to so many production problems.

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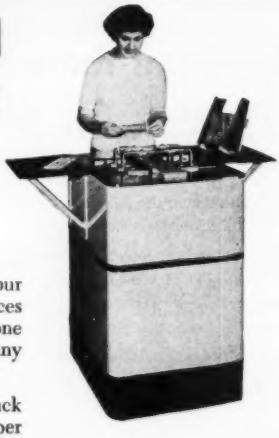
EFFICIENT!
VERSATILE!
SAVES MONEY!



The Neomax Carton Tucker can put your cartoning on a profitable basis. It reduces costly handling to a minimum. With it, one operator can end tuck and close as many cartons as three formerly did.

Suitable for anything that's packaged in tuck end cartons. Production: 25-35 cartons per minute. Fast changeovers. Compact. Portable. Low cost.

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William B. Sanford, Inc.
601 W. 26th ST., NEW YORK 1, N. Y.

U.S. patents digest

tion of the acute angled side wall of the conical paper cup toward the apexial end thereof and shaping the gathered and pleated paper into a substantially transverse surface to form the spoon serviceable bottom.

Suction Picker for Container Caps, D. A. Macking and C. W. Goodwin (to American Seal-Kap Corp. of Delaware, Wilmington, Del.). U.S. 2,563,654, Aug. 7. A machine for dispensing caps from a stack of nested bottle caps having a central depressed diaphragm and a raised annular pouring-rim housing, comprising a plunger having an axial bore terminating in a suction port and an end of reduced diameter forming a shoulder, a suction head comprising a ring seated around said reduced diameter portion against said shoulder.

Apparatus With Movably Mounted Spoon Magazine for Inserting Spoons in Cartons, L. Kulpinski (to Marathon Corp., Menasha, Wis.). U.S. 2,563,728, Aug. 7. An apparatus comprising a conveyor, means on said conveyor for positioning a carton blank relative thereto, said carton blank having a pocket therein, means for intermittently moving said conveyor whereby cartons thereon are carried to an inserting station.

Filling Machine With Improved Valve Mechanism, R. E. J. Nordquist (to American Can Co., New York, N. Y.). U.S. 2,563,863, Aug. 14. In a container-filling machine, the combination of a measuring cylinder having an inlet opening for receiving and measuring a charge of liquid, said measuring cylinder also having an outlet for discharging a measured charge of liquid from said cylinder.

Closure Means for Flexible-Walled Containers, K. E. Freund and E. M. Scharenberg (to The B. F. Goodrich Co., New York, N. Y.). U.S. 2,563,929, Aug. 14. A closure for a liquid container having a flexible wall structure with an access opening therein, said closure comprising a flexible compressible bead secured to said wall structure along the marginal extent of said opening.

Machine for Manufacturing and Assembling Filler Partitions, J. G. Locke (to Anchor Hocking Glass Corp., Lancaster, Ohio). U.S. 2,563,947, Aug. 14. In a machine of this type, a plurality of cutters for severing a moving paper web into separate strips, means adapted to turn strips substantially to erect position and a plurality of fingers intermediate said cutters and turning means each having rollers adjacent the lower part thereof adapted to contact strips, thereby to control the turning of the strips to erect position.

Display Package for Drills or the Like, R. E. Puckett (to United Drill & Tool Corp., Chicago, Ill.). U.S. 2,563,959, Aug. 14. A drill display package comprising a body element formed of stiff material having a plurality of spaced-apart elongated openings of graduated sizes

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U.S. patents digest

therethrough forming pockets therein and a corresponding plurality of drills of graduated sizes constituting a matched set positioned in said pockets.

Carton End-Closure Structure, R. M. Dunning (to Waldorf Paper Products Co., St. Paul, Minn.). U.S. 2,564,099, Aug. 14. A carton comprising a series of side walls and an end closure, said end closure including flaps on two opposed side walls folded into superimposed relation, a flap on the third end wall folded over the innermost flaps to form an intermediate lamination.

Box Cap, A. L. Dickson, Jr., Gulfport, Miss. U.S. 2,564,252, Aug. 14. A removable box cap for an open-topped box comprising a first casing closed at one end and open at the other end, the casing being adapted to be arranged so that its open end embraces the open-topped box and is supported on the open-topped box by its closed end and having a second casing open at both ends positioned within first casing and having one of its open ends dependingly secured to the under surface of the closed end of said first casing.

Stabilized Paperboard Carrier, W. A. Ringler (to The Gardner Board & Carton Co., Middletown, Ohio). U.S. 2,564,449, Aug. 14. A paperboard bottle carrier or like structure having a band portion with side and end walls in articulation for surrounding an assembly of articles to be carried, extensions on the lower edges of side walls providing bottom elements, a central longitudinal partition and handle structure of two plies, and lateral partition elements struck from portions of the side and end walls, detachable interlocking engagement taking place with lateral partition elements.

Adhesive-Applying Machine, A. W. Moffat (to Materials Handling Laboratories, Inc., Boston, Mass.). U.S. 2,564,492, Aug. 14. Apparatus comprising a conveyor for moving articles along a plane, a tank for holding liquid adhesive beneath conveyor and adhesive applicator movable from inoperative to operative position.

Adhesive-Applying Apparatus, A. W. Moffat (to Handling Devices Co., Inc., Boston, Mass.). U.S. 2,564,493, Aug. 14. A conveyor for moving articles along a plane so as to expose the bottom portions of the article and a tank for holding liquid adhesive beneath the conveyor.

Roll-Wrapping Machine, H. E. Clarke (to Canadian International Paper Co., Montreal, Quebec, Canada). U.S. 2,564,594, Aug. 14. In a machine for wrapping large rolls of paper, a main frame, a supply roll of wrapping paper rotatably supported on frame, a pair of supply rolls of relatively narrow outer banding paper rotatably supported on frame and aligned inwardly of the ends of wrapper-paper roll, the distance spanned by banding paper rolls being substantially equal to the width of the paper roll to be wrapped.

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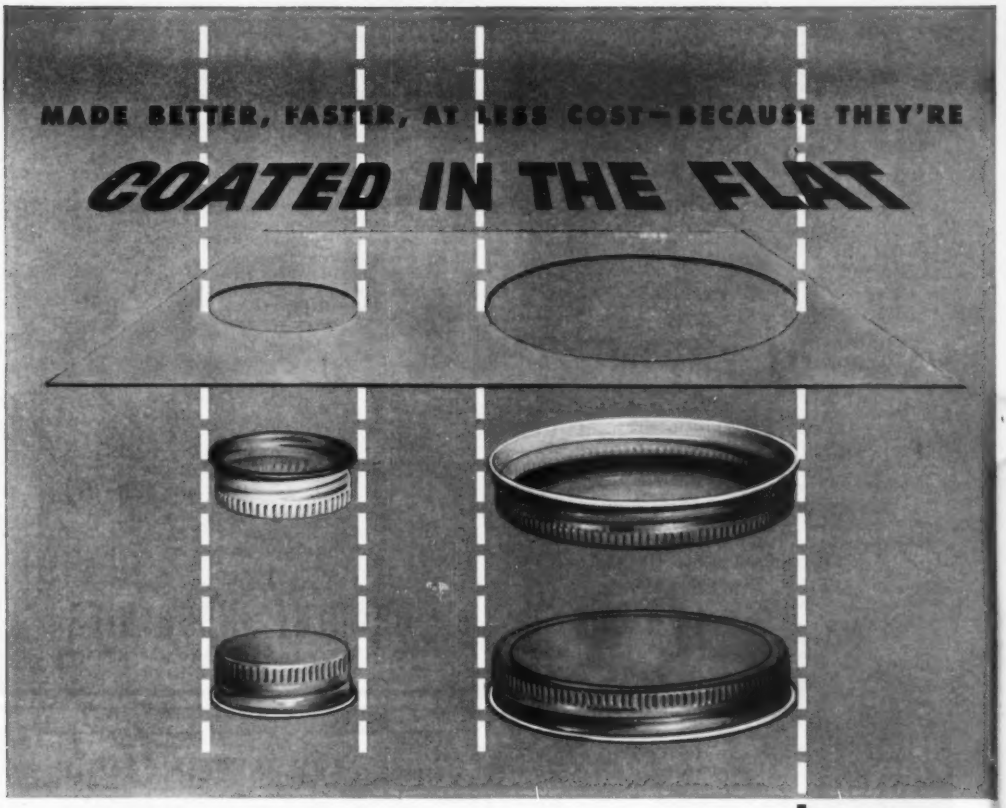

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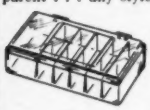

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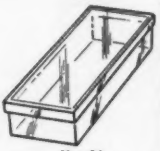

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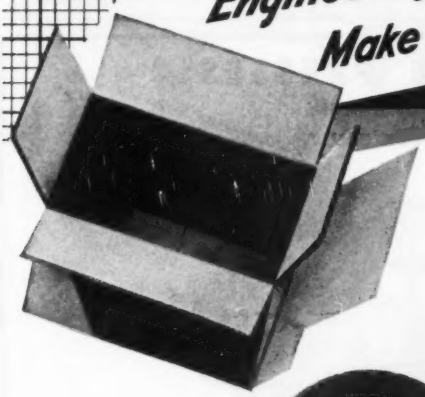

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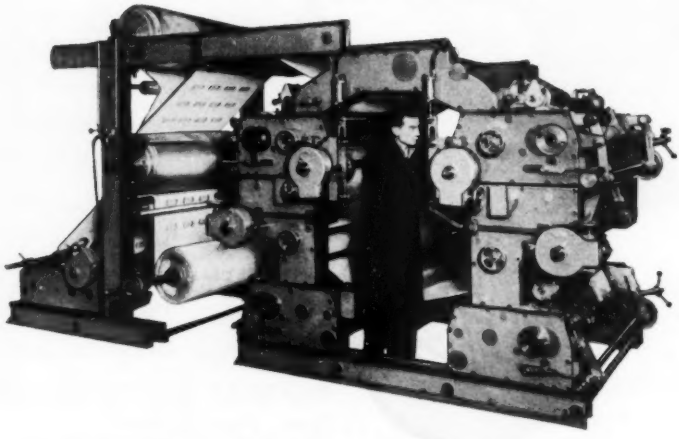

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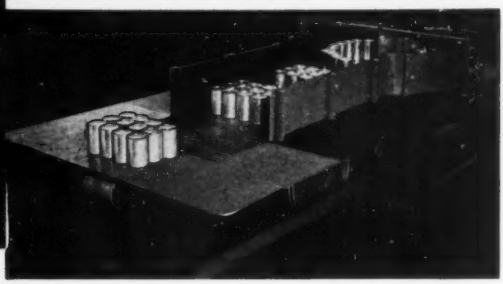

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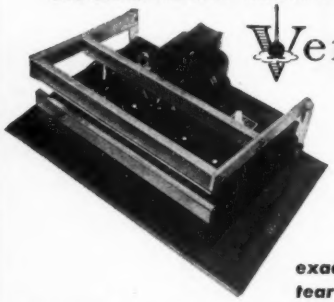

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Camel cigarettes

(*This article continued from page 86*)

year and, although the annual advertising budget for Camels has run into millions of dollars for many years now, the company says that the cost amounts to "much less than half a cent per package." At the rate of 5 billion packages per year, half a cent would be $25 million a year.

To back up this advertising program, Reynolds has built a sales force that spends a large part of its time and energy developing for the retail dealer better methods of merchandising cigarettes—not just Camels, but all cigarettes.

The specific technique of cigarette merchandising in which the Reynolds sales staff is currently attempting to educate the retail trade is a relatively simple thing, best summarized by the phrase "mass display."

The number of retail outlets at which cigarettes are sold over the counter, plus the number of other establishments where cigarette vending machines are installed, is estimated at close to a million. To service these, Reynolds salesmen in every state are constantly on the go, working both with retailers and tobacco-product wholesalers. Such "personalized salesmanship" has been used by the company since its inception.

One of the displays which salesmen took to dealers in 1916 was a package display rack. Although the wording on this elaborately designed rack naturally spoke for Camels, a picture of the display which the representative left to suggest the set-up included competitive brands. This may have been a radical idea at the time, but Reynolds knew his brand would get its share of the business if cigarettes in general were brought out in the open to promote impulse sales.

Another basic idea pioneered by Camels promotion was the cigarette gift carton. As long ago as 1915, a Camel ad at Christmas time featured the carton as a gift idea. The first special holiday design for the Camel carton was designed for Christmas, 1929, when a special paperboard sleeve was slipped over the carton. The first Christmas carton appeared in 1938. This was followed by a Father's Day band in 1940 and a Valentine Day band in 1943. Each of the carton designs featured a convenient "built-in" gift card.

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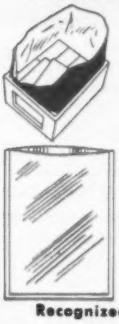

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from which emerge millions of packages of Camels daily, Reynolds operates equipment which is a model of high-speed efficiency. Many of the machines, as in the case of the cellophane overwrappers, were developed outside at the request of the company; others were designed by the company's own engineering staff.

When Camels first went into production on Oct. 19, 1913, there was only one turret-like cigarette packaging machine in the Reynolds plant. Both a day and a night shift were required on the packaging line to keep up with the day's output of the five cigarette-making machines. Each shift was comprised of five workers: a feeder, an operator, a "cup girl" and two hand stampers. In addition, there was a single operator for the separate machine that formed the outer paper cup.

It took at least a half minute to form and complete each individual pack and about three minutes to form and ready the carton halves—a process that involved the use of clothespins to hold the corners of the carton top or bottom in position while the glue dried.

In the many manufacturing sections of the Reynolds plant today are long lines of fully automatic cigarette-making machines, each capable of turning out over 1,000 perfectly formed Camels a minute, with accompanying batteries of packaging machines. Each of these high-speed packaging machines counts and assembles 20 cigarettes at a time in precise rows of 7, 6 and 7, inserts them in the laminated-foil inner wrapper, forms the cup portion, transfers the filled inner wrapper into it and attaches the revenue stamp. Connected with these machines are the wrapping machines that fold and seal the cellophane jacket over the package and add the convenient tear-tape. The entire cycle performed by the two machines is completed in less than a second.

Each package is inspected before being placed in a carton. Cartons are automatically formed and automatically closed.

The "end-to-end" statistic on Camels is particularly impressive: If all the Camel cigarettes produced in any one recent year were joined end to end they would encircle the earth at the equator *well over 150 times.*

The company's founder died in 1918, too soon to realize the future

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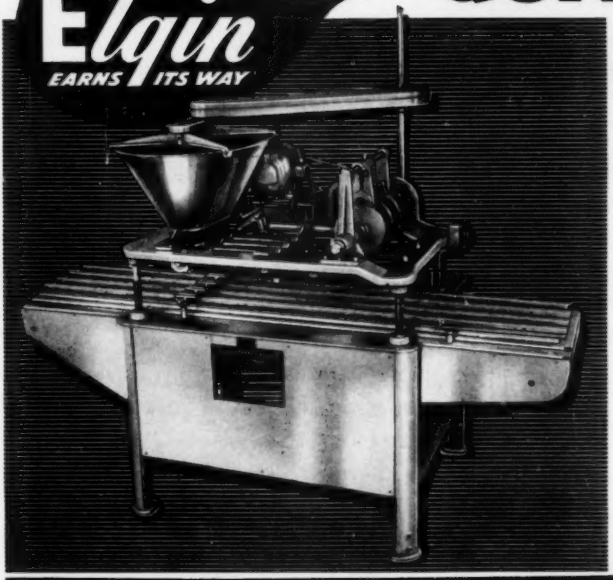

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of the cigarette and the package he devised. But Richard Joshua Reynolds' judgment on what both should have—quality and convenience—has proved excellent. His effect on the packaging field in popularizing the 20s cup-package style may be measured indirectly in terms of the millions of miles of paper, foil, cellophane, paperboard and corrugated used to package the trillions of cigarettes produced in the last 40 years.

A new milk package

A completely new idea in milk packaging, developed in Sweden and recently brought to the attention of paper converters and dairy experts there, is a tetrahedral-shaped paper

container said to combine economy in production, transportation, distribution and manpower, as well as convenience for the consumer.

The pyramid container consists of four sides, each one forming a regular triangle. It uses approximately 40% of the material required for the currently used square paper milk containers—a factor of considerable interest in view of the shortage of paper and paperboard.

An ingeniously designed, extremely compact machine measuring only 8 ft. long, 2 ft. 8 in. wide and 12 ft. in height does the entire job of forming, filling and sealing the containers.

Advantages of the new container for the consumer are its ease of storage and its convenience in use. It can be tucked away into almost any small space available in the refrigerator—even between the tops of bottles, etc. In use, one of the corners of the container can be snipped off with scissors and the milk pours out easily without any dripping or excess remaining on the container. Any one of its triangular sides forms a steady base for the container when it is set on the table.

Material for making this new

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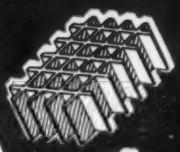

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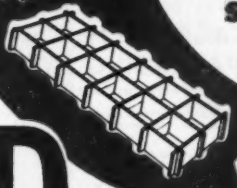

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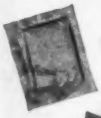

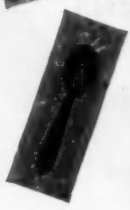

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package is bleached kraft paperboard coated on both sides with a thermoplastic film. The stock is delivered in roll form and the web is fed directly into the machine. The machine forms the material into a tube, milk is fed into the tube and the package is formed around the milk by heat sealing. As the filled tetrahedrons come out of the machine in a continuous strip, they pass through a cutting mechanism that cuts them off into individual packages.

The machine is said to be very simple in construction, to operate continuously at good speed and to be easy to clean and operate. The packaging material is sterilized first in the converting plant and then again just before entering the machine.

CREDIT: *"Tetra Pak" package machine and method, AB Akerlund & Rausing, Lund, Sweden.*

Cosmetics meet trends

(*This article continued from page 77*)

tarlatan fabric tied with a blue satin bow.

Among the interesting new smaller set-box put-ups is Shulton's Desert Flower stick cologne in its carved plastic cover bottle and hand-carved pursette vial with its own green velveteen bag, all visibly housed in a set-up box with transparent acetate window.

Re-use cases

Re-usable kits and cases continue to be important items among the cosmetic gift presentations and this year's offerings reveal a wide variety of interpretations. There are the smaller ones such as the popular blue-suede, draw-string pouch adopted for Chen Yu Cloud Silk compressed powder and lipstick and Dermetics brocaded fabric evening make-up case containing lipstick, powder puff and mirrored compact retailing for a few dollars. And there are the de luxe completely fitted train cases that are real pieces of luggage selling up to $100 and more. Among the interesting plastic materials gaining favor because of durability and economy of fabrication are those made of saran and vinyl sheet. Seaforth is offering a zippered men's case, containing five toiletries in polyethylene bottles, made of woven saran in plaid de-

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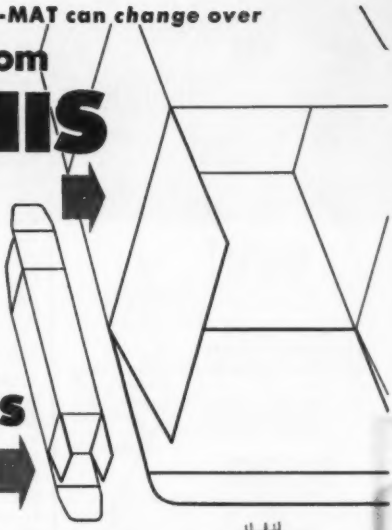

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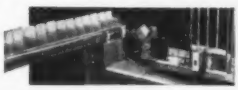

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sign. Vinyl is being used for all types of tiny pocket and purse protective cases, such as for nail files, manicure scissors and eye cosmetics.

CREDITS: *(Where available—identified by photo-caption numbers): 2. Box, F. N. Burt Co., Buffalo, N. Y.; bottle, Carr-Lowrey Glass Co., Baltimore, Md.; closure, Colt's Mfg. Co., Hartford, Conn. 3. Corsage, Republic Ribbon & Bow Co., Inc., New York; vial, Richford Corp., New York; closure, Chase Brass & Copper Co., Waterbury, Conn. 4. Acetate container, Shaw-Randall Co., Inc., Pawtucket, R. I.; powder box, W. C. Ritchie & Co., Chicago; bottle, T. C. Wheaton Co., New York; printing on White Magnolia bottle, Modern Decorating Co., West New York, N. J. 6. Sleeve, Donrico, Inc., New York; polystyrene foam bulb, Zunino-Meehan, Inc., New York; lipstick case, Plume & Atwood Mfg. Co., New York. 7. Box, Wilkata Folding Box Co., Kearny, N. J.; bottles, Carr-Lowery Glass Co.; closures, Terkelson Machine Co., Boston. 8. Boxes, The Warner Bros. Co., Bridgeport, Conn.; bottle and stopper peg, Kimble Glass Div., Owens-Illinois Glass Co., Toledo, Ohio; cork, Dodge Cork Co., Inc., New York; labels, Richard M. Krause, New York. 10. Polyethylene basket for stick cologne container made by Mack Molding Co., Wayne, N. J., in collaboration with Shulton; bottles, T. C. Wheaton Co., etched by Shulton; velveteen bag, Alpha Powder Puffs & Sifters Co., New York. 11. Folding carton, F. N. Burt Co. 12. Box, Carl Voss Corp., Hoboken, N. J.; cover paper, The House of Harley, Inc., New York; bottle, Carr-Lowrey Glass Co.; closure, Victor Industries Corp., Brooklyn, N. Y.; label, The Lord Baltimore Press, Baltimore, Md.; powder box, Cross Paper Products Corp., New York; design, Grace Norcross Fisher, Richmond Hill, N. Y. 14. Sleeve, Robert Gair Co., Inc., New York; bottle, T. C. Wheaton Co.; pintle closure, John Hassall, Inc., Brooklyn, N. Y., in conjunction with Shulton. 15. Sleeve, Farr Screen Processing Co., New York. 16. Folding box, Pioneer Folding Box Corp., Chicopee, Mass.; envelopes, Continental Bag Specialties Corp., Clifton, N. J. 17. Pioneer Folding Box Co. 18. Carton, Brooks & Porter, Inc., New York; bubble bath containers, Cross Paper Products Corp. 19. Folding boxes, Wilkata Folding Box Co.; bottles, Carr-Lowrey Glass Co.; closures, Victor Industries Corp.; bottle labels, The Foxon Co., Providence, R. I. 20. Carton, The Warner Bros. Co.; bottles, Hazel-Atlas Glass Co., Wheeling, W. Va.; Filma-Seal, Ferdinand Gutmann & Co., Brooklyn, N. Y.; closure, Mack Molding Co.; foil wrap on stick, Standard Rolling Mills, Inc., Brooklyn, N. Y.; labels, Richard M. Krause. 21. Top-hat box, Chaspec Mfg. Co., Greenwich, Conn.; polyethylene bottles, Elmer E. Mills Corp., Chicago; color engraving, Modern*

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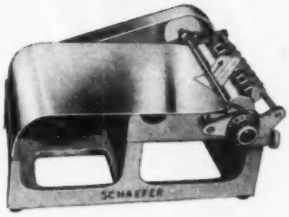

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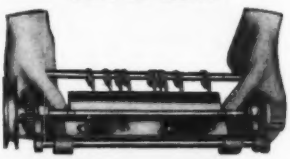

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STOCK PLASTIC BOXES. Catalogue sheets depict 30 different stock plastic boxes and give dimensions. Ira Harmon Co. (X-51)

TRANSWRAP AUTOMATIC PACKAGING MACHINES. Folder contains illustrations and descriptions of machines which automatically form a package from a roll of material, fill and seal it. Volumetric and auger models. Transparent Wrap Machine Corporation. (X-52)

CROWN HANDLING AND USAGE. Booklet tells how bottle crowns are constructed and suggests proper methods for storage, warehousing and handling. Continental Can Company, Inc. (X-53)

INDUSTRIAL CONVEYOR BELTS. Catalogue insert illustrates the construction of three types of industry conveyor belts and gives recommendations for applications of each type. B. F. Goodrich Company. (X-54)

CEL-O-SEAL BANDS. Suggestions on using Cel-o-Seal bands to secure primary closures, for affixing revenue stamps, for preventing "shop wear," for vacuum-pack sealing and other purposes. E. I. du Pont de Nemours & Co., Inc. (X-55)

STACKING AND LOADING CORRUGATED BOXES. Booklet contains hints and suggestions as to the proper method of stacking and loading corrugated boxes for safe, economical shipment. The Hinde & Dauch Paper Co. (X-56)

CELLOPHANE IN THE TEXTILE INDUSTRY. Included is information on the development of Cellophane cellulose film, and its uses in wrapping and sealing textile merchandise. British Cellophane Limited. (X-57)

ANILINE PRESS. Specification sheet on the features of the Kidder Standard Aniliner for printing on foil, glassine, cellophane and Kraft. Kidder Press Company, Inc. (X-58)

POLYETHYLENE FILM, TUBING, AND SHEETING. Folder contains charts showing yield of sheeting in lineal inches for various widths and gauges of polyethylene film. Durethene Corp. (X-59)

JEWELRY BOXES. Catalogue contains illustrations and dimensions of short cover, hinged cover, loose cover, and specialty boxes designed for packaging jewelry items. Oscar Trilsch Company. (X-60)

FILLING AND CAPPING EQUIPMENT. Given is a summary of the entire line of Elgin filling and capping equipment. Short descriptions give suggested uses and illustrations of the equipment. Elgin Mfg. Co. (X-61)

FACTS ABOUT PLIOFILM. A "question and answer" booklet which gives information about Goodyear Pliofilm. The Goodyear Tire and Rubber Co., Inc. (X-62)

TRANSPARENT PLASTIC BOXES. Folder contains illustrations and dimensions of a large assortment of clear polystyrene stock boxes. Price list included. Bradley Industries. (X-63)

POLYSTYRENE. Covered in this folder are the properties of six types of Koppers polystyrene. Koppers Co., Inc. (X-64)

PACKAGING MACHINES. Folder shows automatic machines for performing various packaging operations such as wrapping, bundling, pop wrapping and tray wrapping. Package Machinery Company. (X-65)

PALLET DOLLIES AND CONVEYORS. Bulletin explains features and specifications of a gravity conveyor and a dolly specifically designed for handling palletized loads. Island Equipment Corp. (X-66)

CARTON MARKING. Automatic machine for imprinting large cartons and cases as they move along the production line is described in this foder. Contains information on base-lock rubber type. Industrial Marking Co. (X-67)

CONTINUOUS BAND SEALERS. Catalogue insert shows various heat sealers for sealing of paper and for construction of barrel liners from heavy foil and other liner materials. Includes price list. Sav-Way Sara Seal, Inc. (X-68)

CORRUGATED WRAPPING PAPER. Shellcrease, a packing material which combines both the flexibility of wrapping paper and the protective qualities of corrugated board is presented. Illustrations show method of use. Shelton Mfg. Co. Inc. (X-69)

AUTOMATIC WEIGHING AND FILLING MACHINES. Various models of Holm automatic weighing and filling machines, as well as bulk scales, for all types of free flowing and semi-free flowing products are discussed. Specifications are included. Amsco Packaging Machinery, Inc. (X-70)

SPRAY-COATED CONTAINERS. Actual production samples demonstrate the varieties of decorative effects which can be obtained by spray-coating glass containers. Ceragraphic, Inc. (X-71)

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POLYETHYLENE. Booklet contains a complete description of Bakelite polyethylene including listings of all important characteristics and description of methods for fabricating. Bakelite Company, Division of Union Carbide and Carbon Corp. (X-72)

MARKING MACHINE. Bulletin explains the features of the "Husky 6" machine for marking plastics, wooden articles and painted surfaces. Specifications included. Markem Machine Company. (X-73)

CAN MAKING MACHINES. Specifications and features of Hamilton-Kruse strip feed presses and end curlers for making can ends, screw caps, sardine boxes and other light stampings. Baldwin-Lima-Hamilton Corp. (X-74)

ACETATE BONDED ALUMINUM. Data on a pliable, printable, heat sealing material for high speed, automatic packaging machines. Meets the requirements for military packaging of many food products. Reynolds Metals Company. (X-75)

MULTIWALL BAGS. Booklet describes proper storage, filling, closing, handling, and palletizing of multiwall paper bags. Bemis Bros. Bag Co. (X-76)

PACKAGING TOMATOES IN LUMARITH. Details on the advantages of "breathing" Lumarith transparent wraps for packaging tomatoes. Celanese Corporation of America. (X-77)

KROMEKOTE BOX WRAPS. Booklet contains sample swatches of various colors of new cast coated paper with high gloss, rub resistance and light-fastness. The Champion Paper and Fibre Co. (X-78)

MOISTURE-VAPORPROOF BAG. Sample of a barrier bag which is available in various types of materials, both cloth or kraft backed, in compliance with JAN-P-131 and JAN-P-117. United Mineral and Chemical Corp. (X-79)

BOTTLE WADDING EQUIPMENT. The Consolidated Kottoners Models K-2, K-3, and K-4 used for bottle wadding are illustrated and described. Consolidated Packaging Machinery Corp. (X-80)

AUTOMATIC AMPOULE FILLER. Specification sheet on an automatic twin ampoule filling machine with entire filling mechanism made of glass for clean, sterile filling of pharmaceutical products. Perl Machine Manufacturing Company. (X-81)

CRYSTAL CELLOPHANE. Bulletin illustrates and describes Crystal cellophane with or without printing for packaging holiday candy canes. Crystal Tube Corp. (X-82)

TABLET INSPECTION UNIT. The "hows" and "whys" of a machine for eliminating manual handling of tablets during inspection prior to packaging. The Lakso Co., Inc. (X-83)

AUTOMATIC WRAPPING MACHINES. Bulletin explains the features of various Hayssen automatic wrapping machines for bacon, weiners, sausage, and other similar products. Hayssen Mfg. Company. (X-84)

TURRET LABELER. Described is the World Turret Labeler, designed for fully automatic, continuous, low cost labeling of glass containers. Illustrations and diagrams showing construction are included. Economic Machinery Co. (X-85)

INDUSTRIAL HUMIDIFIER SYSTEM. Contained in this illustrated booklet are the advantages and description of a system for maintaining controlled humidity in offset printing, bag making, and paper carton plants. Walton Laboratories, Inc. (X-86)

FAN DIAL SCALES. Specifications, features, advantages of Exact Weight's new line of automatic fan dial scales. The Exact Weight Scale Co. (X-87)

RECORDING AND PRINTING COUNTER. Features, uses, and specifications of the FMC single and multiple unit electric counter for on-the-spot or remote control. Food Machinery and Chemical Corp. (X-88)

PARABOLIC HEATERS. Description of parabolic gas, electric, and infra-red heaters for pre-conditioning sheets and for drying printed matter. Herbert Products, Inc. (X-89)

COLLATING MACHINE. Description and specifications of an automatic machine for collating bundles of folded papers. The John G. Herrmann Co. (X-90)

CARTONERS. Bulletin briefly describes the Jones fully automatic and semi-automatic cartoners and gives a partial list of users of the fully automatic cartoner. R. A. Jones & Co., Inc. (X-91)

FILLING MACHINE AND ATTACHMENTS. Described is the fully automatic, high speed Fillmaster filling machine used for dry and semi-dry products. Also included are details about various attachments. Stuyvesant Engineering Co. (X-92)

MOUNTING AND PROVING MACHINE. Operations, specifications, features of the new Mosstype machine for off-the-press inregister mounting and proving of rubber printing plates. Mosstype Roller Co., Inc. (X-93)

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Art Printing Co.; closure, Colt's Mfg. Co. 22. Carton, Brooks & Porter, Inc.; bottles, Carr-Lowrey Glass Co.; closures, Mack Molding Co.; labels, The Foxon Co. 23. Acetate box, F. N. Burt Co.; bottles, Carr-Lowrey Glass Co.; closures, Brass Goods Mfg. Co., Bridgeport, Conn.; labels, Richard M. Krause. 26. Zippered saran bag, Columbia Products Corp., Brooklyn; polyethylene bottles, Plax Corp., Hartford, Conn.; printing on bottles, Art Roll Leaf Stamping Co., Union City, N. J.; closures, Mack Molding Co. 27. Vinyl case, Columbia Products Corp., Brooklyn, N. Y. 28. Vinyl cases, Welded Plastics Corp., New York. 29. Brocade kit, A'Cadia Powder Puff Co., New York; lipstick case and compact, Eyelet Specialty Co., Waterbury, Conn. 30. Flocked rayon pouch (Suedine), Minerva Heico Mfg. Co., New York; box, F. N. Burt Co.; lipstick case, Scovill Mfg. Co., Waterbury, Conn., and Plume & Atwood Mfg. Co.

Goodman's

(*This article continued from page 95*)
The same device is used wherever the trademark appears on the sides.

Although the familiar Goodman blue remains the basic package color, the shade has been lightened and by using a special varnish-type ink the color is also brightened. To relieve the solidness of the color on the display panel and to make the product name more legible, a wide white border has been put across the bottom portion. Product information is printed in red and blue.

The acetate window used on previous cartons was also retained since it was found that shoppers heartily approved of its convenience.

On side panels, greater emphasis is placed on other Goodman products by cross-selling copy and an invitation to write for additional recipes.

The back panels of the noodle packages carry one or more recipes, depending upon their size. Three and four series of recipes are printed on these cartons, which are mixed in packing the shipping cases. This assures that a grocer receives at least three combinations of recipes in one shipment and that a shopper who has already found Group A recipes can purchase a carton with Group B or C.

After the first of the redesigned packages were released to retail outlets, members of the packaging committee followed through to check consumer reaction. Shoppers in 15 supermarket stores located in the metropolitan New York area were in-

One Simple Installation

-the Walton HUMIDIFICATION SYSTEM

—eliminates these PACKAGING trouble spots!

CRACKED SCORING

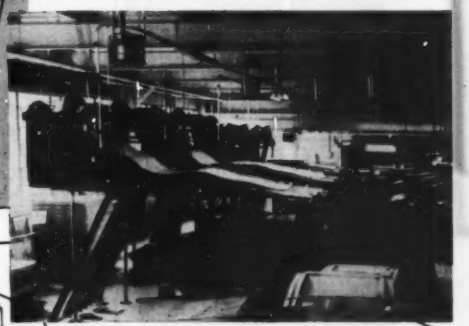
CURLED PAPER

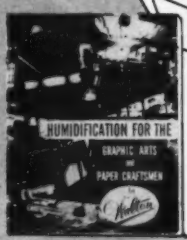
POOR REGISTER

PRESS CHOKEUPS

EXCESSIVE WEAR ON RUBBER ROLLERS

Paper and paperboard stocks conditioned by Walton retain their proper moisture content thus maximum strength is maintained. The Walton System eliminates cracked scoring, poor register, press chokeups resulting from static and troubles due to curled paper. Rubber covered rollers, rubber plates and wooden parts last many times longer with controlled humidity provided by economical Walton Humidifiers. Investigate the many advantages of the easy-to-install Walton System, now!





Just Off the Press—

WALTON LABORATORIES, INC. 112
Irvington 11, New Jersey
Please send new edition of "Humidification for the Graphic Arts and Paper Craftsmen" to:

NAME _____
COMPANY _____ TITLE _____
STREET _____
CITY _____ STATE _____

SPECIALISTS IN INDUSTRIAL, COMMERCIAL AND RESIDENTIAL CONTROLLED HUMIDIFICATION

labels
tags
seals
wraps

individualized labeling

For all seasons throughout the packaging year. Call CAMEO today for labeling that is both informative and distinctive.

Labels and Seals
multi-color
printed
embossed
gold & silver foil
gummed
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Distinctive Tags
for
advertising
promotion
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production

CAMEO
DIE AND LABEL COMPANY
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156 WEST 14th STREET
NEW YORK 11, N. Y.
OR 5-0228

terviewed and asked to state their preference between the old and new designs. The new design passed this field test with flying colors and full production of cartons for other items has now been started.

CREDIT: *Cartons, Robert Gair Co., Inc., New York.*

Formula for quality

(*This article continued from page 69*)
easier for suppliers to locate trouble and correct it in order to meet specifications—hence, it is welcomed by most suppliers.

Some firms today are broadening the scope of statistical quality control to cover more completely the performance of mechanical packaging equipment and believe that some of the greatest advances can be made in this category. One firm which recently instituted an over-all statistical quality-control program will not authorize its engineering department to pay for any piece of equipment until its performance meets the standards established by the quality-control department.

The more highly mechanized and high speed a packaging operation becomes, the more essential is the need for statistical principles to control it and the more definitive the control program must be to assure uniformity. The more sharply all processing elements conform to the standards, the more efficient is the operation.

Among the first in the packaging field to make progress in statistical-control methods, perhaps, were the food and soap manufacturers, where high speed and efficiency at low cost are all-important factors. Next were the large producers of toiletries, by whom statistical quality control has been used extensively for improving package appearance.

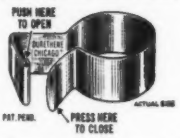
Oddly, the drug industry, which has always held the record for maintaining the highest quality, due to the nature of its products, has been among the most recent to adopt statistical control for packaging. This has probably been due to its relatively smaller volume of production and its continued insistence on 100% inspection of finished product. Today, however, this field too is making important progress in the use of statistical quality control of its packaging, primarily because drug packaging is becoming more highly mechanized

Durethene Chicago

NEW
"SNAP IT SHUT"
BAG AND LINER
CLOSURES

FOR SMALL BAGS
SMALL No.100-1
Small Bag Closure

FOR LARGE CARTON AND DRUM LINERS
LARGE No.100-2
Large Bag and Liner Closure



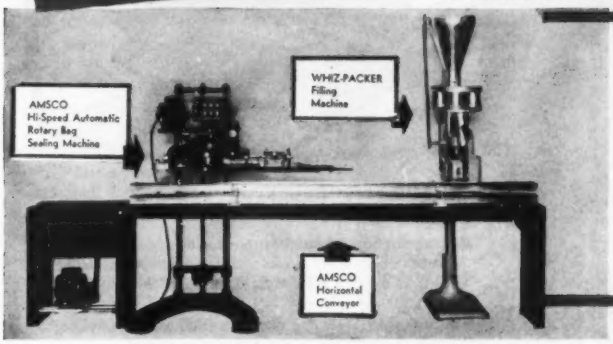
- MADE OF STAINLESS STEEL
- INEXPENSIVE
- EASY TO USE
- UNAFFECTED BY TEMPERATURES
- CAN BE USED OVER AND OVER AGAIN
- NO TOOLS REQUIRED TO PUT ON OR TAKE OFF
- WILL NOT RUST
- AVAILABLE FOR FAST SHIPMENT FROM STOCK
- SAMPLES ON REQUEST

A DURETHENE PRODUCT
PRODUCERS OF FLAT AND TUBULAR POLYETHYLENE FILM FOR THE BAG CONVERTER

DURETHENE Corporation
1859 SO. 55th AVENUE
CHICAGO 50, ILLINOIS

making a quality product is *your* business
packaging it economically is *our* business!

AMSCO
PACKAGING EQUIPMENT



If you are interested in reducing the cost of your bag packaging, an AMSCO engineer will show you how. We can supply cost-saving equipment for every operation, starting from the roll stock to the finished product . . . bag making, bag filling, bag conveying, bag sealing . . . individual units available for each operation or complete bag packaging set-ups.

Choose AMSCO to package your product in cellophane, moralux, diafane, foil, pliofilm, polyethylene or any other heat sealable material . . . printed or unprinted. Savings in labor and increased production pay for your AMSCO equipment in a comparatively short time. Contact AMSCO today! Write Dept. M-10 for complete catalog.

Bag packaging features to meet special requirements. 3 illustrations are shown below.

AMSCO PACKAGING MACHINERY, INC.
31-31 48th Avenue Long Island City 1, N. Y.
Specialists in Diversified Packaging Equipment.

GLUEMASTER

Round Can-tainer Labeler
The Latest Development in Labeling

The only method of labeling between the hand application and the completely automatic.

THREE TIMES THE PRODUCTION WITH *GLUEMASTER*

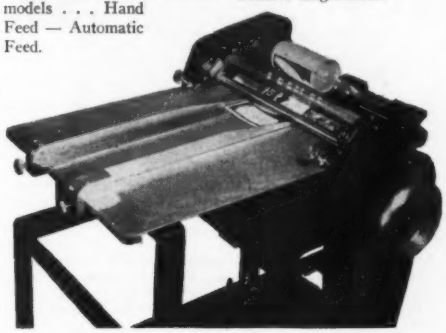
GLUEMASTER furnished in two models . . . Hand Feed — Automatic Feed.

FEATURING . . .
Style—RC. Size—12" & 18".

Capacity — 1½" to 8" in diameter; 1" to 18" in length.

Size of Label — Half, three-quarter or all around.

Speed — variable speed, up to 30 per min.
Positive Registration.



KENNETH J. MOORE & CO.
1778 West Estes Avenue Chicago 26, Ill.

SMALL POLYETHYLENE BAGS

Immediate attention to large or small orders.

We produce bags as small as ½" x ½". All gauges. Custom shapes. Write for samples. Quick delivery.

KAGE CO.
130 Hartford Road
Manchester, Conn.

PRODUCT PROTECTION

You can see through...

It's Modern, Low-cost LUSTEROID

You can "kill two birds with one stone" in packaging, too, by using Lusteroid vials and tubes.

These modern, low-cost plastic containers do double duty for your product. They not only PROTECT it, but they also DISPLAY it through crystal-clear walls.

It doesn't take long to see through the advantages of combining merchandising with protection in Lusteroid.

Consider, too, the savings in Lusteroid's light weight, print-ability, and lower labeling, handling and shipping costs. You'll like Lusteroid's unlimited choice of colors—clear or opaque.

Sizes range from ¼" to 1½" in diameter—lengths to 6". Specials, too. Cork, slip-on or screw-cap closures.

Write for samples and new low prices.

LUSTEROID

Lusteroid Container Company, Inc.
10 West Parker Avenue, Maplewood, New Jersey

Faster Sealing, Less Fatigue, More Output!

PACER Phantom Feed

There's no effort, no fatigue to packaging with the PACER —a mere touch of the fingers and Phantom Feed seals the bag. With Pacer's Automatic Sealing *up to 50% more output is obtained!*

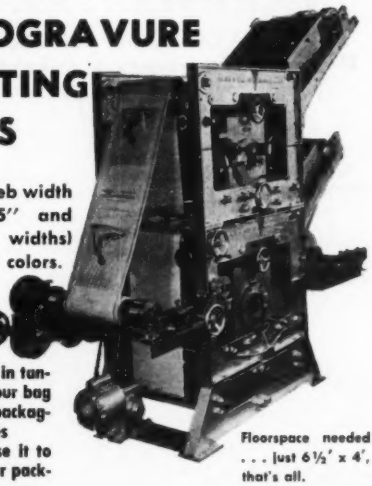
Handles all heat-sealing materials such as Polyethylene, Pliofilm, Cellophane, Saran and barrier materials.

Whatever your PACKAGING PROBLEM *write for information* on the *full line* of HEAT SEAL-IT Machines—A model for every purpose!

*** GLOBE ***
HEAT-SEAL, INC.
HEAT SEAL-IT DIVISION

3372 Robertson Blvd., Los Angeles 34, Calif.

Inexpensive... MINIATURE ROTOGRAVURE PRINTING PRESS



. . . 10" web width (also 15" and 20" web widths) up to 3 colors.

. . . Use it in tandem with your bag making or packaging machines . . . or use it to preprint your packaging webs.

Floorspace needed . . . just 6½' x 4', that's all.

This is KILB's Two Color Miniature Rotogravure Press. It consists of two Single Color Units, mounted one above the other. Includes dryers and unwind and rewind mechanisms. This is our latest design Two Color model that sells for only $3533.00 complete (less motors). Write for literature and prices.

FRANCIS C. KILB CO.

Manufacturers of Miniature Rotogravure and Aniline Multi Color Web Presses

140 E. Second St. Garden City 7-7191 Mineola, L. I., N. Y.

which, in turn, requires a more adaptable means of checking for continued maintenance of high standards of package appearance. An expensive drug, well made and perfectly controlled as to formula, control number and identity, will not inspire the confidence of the medical profession or the patient with an off-color, off-center label, no matter how efficient is the product.

The important point for every packager to realize is the increasing application of scientific statistical-control methods to insure superior products. Managements which may regard such methods as costly can often be convinced through the solution of a single urgent problem. In operation, users say, the program quickly demonstrates its economy and management wonders how it ever got along without it.

A one-room laboratory and a staff of only a few people are all that is required to administer statistical quality control of materials in one company selling more than $100,000,000 worth of packaged products, uniformly packaged in nine separate plants throughout the country—a very small outlay, indeed, for the part such a department plays in building a finished quality package that makes the consumer come back again for more.

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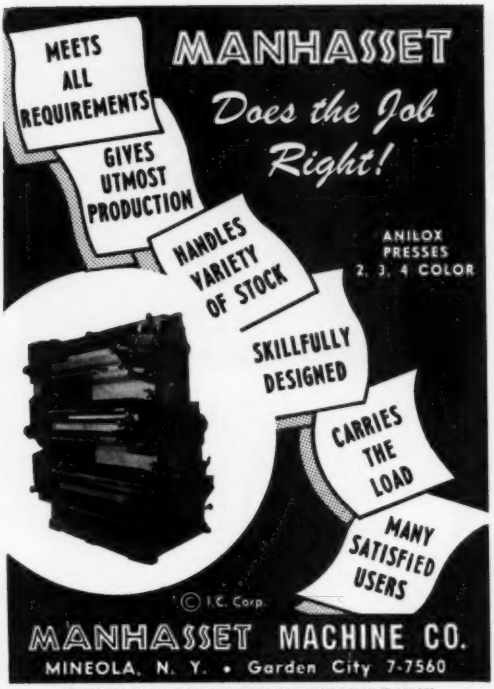
Sealing Unlimited
...for LIFE of
CONTAINER and PRODUCT
TO CLOSE
TO OPEN
U-PRESS-IT
HERE
PRESS SIDES DOWN AND IN
The famous Upressit Seal now available for glass as well as cans.
Here is the efficient and reliable way to protect your products . . . keep them fresh . . . prevent leakage and spoilage.
A visible tamper-proof over-seal assures users that the contents of the container are intact.
Make it easy for your customers to open your package. Thumb pressure releases Upressit cap . . . thumb and two fingers reseal it...air tight. No more complaints about leakage . . . evaporation . . . staleness. No more tempers lost and no fingers scarred in battling to get the package open.
Upressit caps are available in a wide variety of sizes . . . may be specially lithographed with your own brand mark or trade name.
Write for complete information and prices.
U PRESS IT
UPRESSIT PRODUCTS CORPORATION
LEXINGTON AVENUE NEW YORK 17 N Y



COMPLETE FACILITIES FOR SPECIAL DEVELOPMENT WORK

Attention..getters

designed to meet your need

quality... and service are stressed factors...

OLIVE CAN COMPANY
450 N. LEAVITT STREET
CHICAGO 12, ILLINOIS

Quick Quiz

FOR PACKAGING MEN

Q. Which packaging magazine provides the greatest amount of helpful editorial material and how-to-do-it information for its subscribers?

A. An actual page-by-page count reveals that for all twelve issues in 1950, MODERN PACKAGING provided far more data to its readers than any of the other four publications in the packaging field.

Specifically, MODERN PACKAGING gave 70% more pages than the second magazine, 127% more than the third, 150% more than the fourth and 214% more than the fifth!

Q. Which magazine is the first choice of packaging advertisers?

A. Judged by the votes of the men who should know best—the companies and advertising agencies who back their opinions with actual advertising appropriations—MODERN PACKAGING is far and away the field's most powerful and influential medium.

In 1950, MODERN PACKAGING carried the advertising of 82% more advertisers than the second magazine, 361% more advertisers than the third, 373% more advertisers than the fourth and 419% more advertisers than the fifth. And in this same twelve-month period, 181 companies—almost half of all its advertisers—used MODERN PACKAGING *exclusively to carry their messages to the packaging* field!

Q. Which packaging magazine presents the greatest amount of helpful advertising messages?

A Again the answer is MODERN PACKAGING! The record shows that in 1950 MODERN PACKAGING carried greater advertising volume than three of the other four magazines combined and twice as many pages as the second ranking publication!

Q. Which of the magazines is the oldest and most influential in the field?

A The records show that before the first issue of MODERN PACKAGING, back in 1927, packaging was not clearly recognized as one of the greatest single factors in modern merchandising and distribution. MODERN PACKAGING pioneered that idea and has been largely responsible for establishing packaging operations on a sound and scientific basis.

If you make anything that packagers buy, you'll want to know more about* MODERN PACKAGING *as an advertising medium: who it reaches, how it stimulates buying action, how much it costs to deliver your sales messages in it. Just write to Advertising Department,* MODERN PACKAGING MAGAZINE, *575 Madison Avenue, New York 22, N. Y.

Wrapped cocoa disks

United Nations soldiers in Korea are concocting their breakfast cocoa from cellophane-wrapped, light brown disks supplied in their field rations. These little disks of vitamin-enriched chocolate are produced and packaged on the machine of a ceramics manufacturer which had only to change the shape of the dies on its standard tile

press to adapt the equipment to this purpose.

The cocoa, which comes in the form of a dry premixed powder, is delivered in large sealed drums. The powdered cocoa is compressed on a standard hydraulic tile press under 100 tons of pressure into a disk shape. The compressed cocoa is then machine wrapped in cellophane and heat sealed to prevent decay and loss of flavor. The flat, square sheet of cellophane used for the packaging operation is placed into a metal form. The cocoa disk is then placed on it and pushed into the form. A conveyor moves the cocoa under the sealers, where the loose cellophane ends are folded down and sealed by heat.

The cellophane-wrapped cocoa disks are then placed in corrugated containers and shipped to a firm which assembles and packs the complete field rations in individual containers for delivery to the Army Quartermaster Corps.

The entire operation, requiring only one press and six workers, occupies only a small corner of the main ceramics plant. This corner has been partitioned off from the rest of the plant and is as clean and sanitary as food-processing plants.

CREDIT: *Wrapped cocoa disks, Gladding, McBean & Co., Los Angeles, Calif.*

* they're Sensational in full color

Ceragraphic, inc. *

252 South St., Newark 5, N.J. • Mitchell 3-1800
New York Phone — Whitehall 3-4730

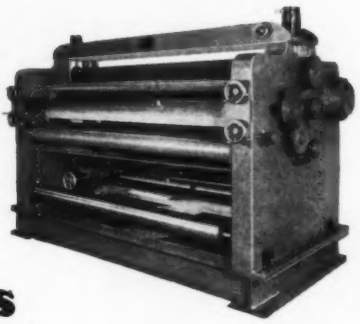
Ceragraphic spray-coats stock mold glass containers for unrivaled beauty and distinctiveness . . . in your particular colors and individuality. Containers can then be decorated and printed with stunning modern effects and embellished by handsome closures.
. . . whether you select transparent, translucent, opaque, metallic or antique effects. Spray-coating is a natural for cologne sticks, liquid colognes, toilet water, perfumes or any other products you wish to endow with glamour

Free!

Write for a sample collection of spray-coated containers in lush, glamorous colors. Have them on your desk when you plan new packaging or redesign existing containers. With our facilities and experience, we can make spray-coating an economical, important innovation.

NEW REVERSE ROLL COATING METHOD CALLED CONTRACOATING

CONTRACOATER



Use the Contracoater for:
coating, casting, treating, impregnating
on
paper, cloth, foil, film, duck
with
lacquers, resins, organisols, plastisols
at
speeds to and above 300 FPM, depending on drying capacity,
to obtain
controlled uniform coating in exact thickness and width

KOHLER SYSTEM EQUIPMENT • PRODUCT OF DILTS

Dilts

Developed by Dilts in cooperation with experienced operators of coating machinery, this new machine offers the advantages and eliminates the disadvantages of ordinary reverse roll coaters.

There is no creeping of coating past dams in the Contracoater because the dams are located under, not over, the metering rolls. Gravity aids, does not hinder, the control of coating widths in the Contracoater.

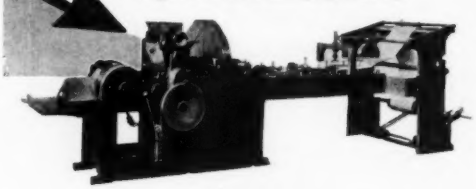
It will pay you to find out about the Contracoater.

Contact Dilts for Contracoaters and for complete coating installations. Write for "Design of the Month" No. 5.

DILTS MACHINE WORKS, Fulton, New York • Division of the Black-Clawson Co. Hamilton, Ohio

over 400,000 printed bags per day!

- Flat and Square (Gusset) Paper Bags
- Single or Double Wall (Duplex) Bags



. . . available in tube lengths ranging from 4" to 30¾" and width sizes from 2" to 19¾"

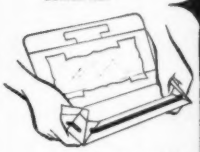
WINDMOELLER & HOELSCHER SINCE 1849

Endprinter available. Universal drive instead of chains ensures perfect register.

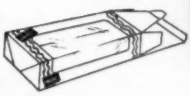
WRITE FOR 15 REASONS WHY YOU SHOULD OWN A MATADOR

H. H. HEINRICH COMPANY 300 VARICK ST. New York 14, N. Y.

Comes flat



Sets up quickly and easily



Can be either top or end filled

10 YRS PROOF

THIS BOX BOOSTS SALES!

Since Zumbiel designed their first two-vue candy box of the type pictured, (10 years ago) the baking, candy and other food industries, both national and local, have increasingly adopted this automatic style windowed box.

This fact proves overwhelmingly that this box (tailored to *your* product) catches more eyes, sharpens more appetites, and steps up sales.

Please detail your requirements for quotation on this, or any type listed below.

SET UP FOLDING TRANSPARENT MAILING PRONG METAL CORNERED FRAME-VUE

Over 75 years of good packaging ideas

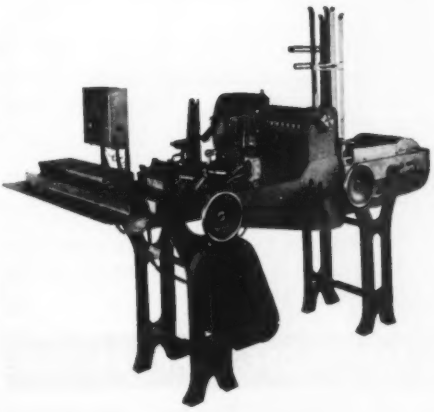
C.W. ZUMBIEL COMPANY Norwood 12, Ohio

WAXED WRAPS are *Scandia* projects!

Whatever you wrap—or whatever you *use* for wrapping—remember to check *first* with Scandia.

Cellophane, foil, kraft or waxed wraps—all are equally well—and excellently applied to foods, drugs, tobaccos, candies, and other products that need protection.

What's more, Scandia wraps *tight;* insures freshness; registers printed wraps accurately—and includes tear-tape if desired.



Want details?

Scandia

MANUFACTURING COMPANY

501 BELLEVILLE TURNPIKE

NORTH ARLINGTON NEW JERSEY

Better Aniline Printing

by incorporating shellac in your aniline inks

By formulating aniline printing inks with Mantrose Quality shellac you can obtain the following characteristics:

Better adhesion — Improves the retention of pigment by film, foil and paper. Increases scuff and scratch resistance.

Better gloss — Adds a pleasing soft lustre to printed areas.

Better coverage — Insures uniform appearance of large flat areas.

Better finish — Provides a hard, non-tacky, non-smearing surface when dry.

#65 refined extra white bleached shellac. For clear or transparent inks. Contains no wax.

Bone dry bleached white shellac. For best printing of heavy, even, opaque solids.

Mantrose maintains a complete laboratory to develop a shellac that meets your requirements.

SEND FOR SAMPLES. A sample of the above grades will be sent upon inquiry on your business letterhead.

The MANTROSE CORPORATION

Importers • Bleachers • Manufacturers
136-146 Forty-first Street
Brooklyn 32, N. Y.

Quality SHELLAC

Catch her eye and she'll buy!

DAY-GLO FLOCK

unparalleled brilliance

For color samples and sources of DAY-GLO *flocked papers, write*

Rayon Processing Co. of R. I., Inc.

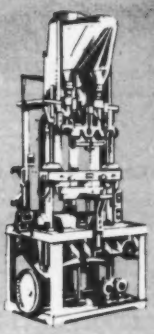
PIONEER PRODUCERS OF SURFACE-COATING FLOCKS

110 Moshassuck St. Pawtucket, R. I.

"package more profits" with S & S Packaging Machinery

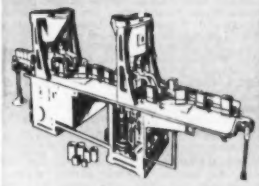
The logical choice of many well-known manufacturers is S & S Packaging Machinery . . . for consistent, trouble-free operation and high speed production. Whether your product goes to consumers in bottles or cans, odd shapes, boxes or bags, there's an S & S Packaging Machine "tailored" to your requirements.

Consult our engineering staff on all Packaging and Filling problems.

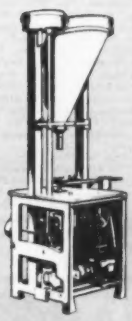


STOKESWRAP AUTOMATIC PACKAGING MACHINE

NEVERSTOP CARTON FILLING AND SEALING MACHINE



AUTOMATIC POWDER FILLING MACHINE



UNIVERSAL FILLING MACHINE

STOKE S&S MITH Co

PAPER BOX MACHINERY — PACKAGING MACHINERY

fmc

Subsidiary of Food Machinery and Chemical Corporation

Frankford, Philadelphia 24, U. S. A.

Exclusive West Coast Distributor

Anderson-Barngrover Division of FMC • San Jose 5, California

CLASSIFIED ADVERTISEMENTS

Modern Packaging reserves the right to accept, reject or censor classified copy.

EMPLOYMENT • BUSINESS OPPORTUNITIES • EQUIPMENT (used or resale only)

MACHINERY FOR SALE

FOR SALE: 2 Markem P.A.M. Machines 1½ years old, in good condition, variable speed, V built drive allows 75 bottles, plastics, metals, etc. . . . of ⅛ to 2½ inches diameter to be printed per minute. Maximum label size 1⅝x8. Contact Purchasing Department, Cutter Laboratories, 820 Parker St., Berkeley, California.

FOR SALE: One color rotogravure press especially designed for cellophane printing. 24" web width, unwind and constant tension rewind. Reply Box 247, Modern Packaging.

FOR SALE: Complete carton packaging line for dry, free flowing material. Pneumatic Scale 30 per minute with Standard Knapp case sealer. In top operating condition. Can be bought at saving of approximately $7500, under new equipment. Location California. Immediate delivery. Reply Box 248, Modern Packaging.

WILL SACRIFICE — For Quick Sale — Latest model Pony Labelrite labeling machine, complete with all controls. Actually used less than 10 hours and in perfect condition. Also, we have 9250 sheets, 28x44-260M (100 lb.) Champion All-purpose Litho-label paper, packed on skid. Make us an offer for either one or both items. Reply Box 251, Modern Packaging.

FOR SALE: 1-Pneumatic Scale Packaging Unit, including Tight Wrap, 32 per minute. 1-Self adjusting Standard Knapp Gluer-Sealer & Compression unit, minimum carton 8⅝" long x 5½" wide x 5½" high, maximum 15¾" x 11½" x 8¼"; 2-Ceco Adjustable Carton Gluer Sealers Model A3901-12; 8-Pneumatic Scale Pouch type Tea Bag Machines; 1-Knapp 3B Wraparound Labeler; Pony M, ML, MX Labelrites; Standard Knapp adjustable type D Wraparound Labeler; Burt AU Adjustable Wraparound, World Improved, Model CH & Model S Spot Labelers; Miller MPS17, MPUS Cellophane Wrappers; Stokes & Smith S-S G-1 Powder Filler. Only a partial list. Send us your inquiries. Consolidated Products Co. Inc., 16-20 Park Row, New York 7, N. Y., Phone: BArclay 7-0600.

ROTOGRAVURE PRESS, 5 color, 24" maximum web, AC motor, electric drying units, overall dimensions 12' long, 4½' wide, 8½' high. Excellent for printing cellophane, foil, paper & glassine. Reply Box 250, Modern Packaging.

FOR IMMEDIATE DELIVERY AT GREAT SAVINGS: International S. S. Straightline 160/min. Vacuum Filler. Resina S and LC Auto. Cappers. New Way MB Wraparound Labeler. Ponly ML and MX Labelrites. Stokes & Smith G1, G2 and HG88 Auger Powder Fillers. Triangle Elec-Tri-Pak G2C, A6CA Fillers. Filler 1, 2, 4 and 8 Head S. S. Fillers. F. J. Stokes 90D Auto. Tube Filler and Closer. Knapp 429 and Ceco Carton Closers. Pneumatic Scale Auto. Cartoning Line. Redington and R. A. Jones Automatic Cartoning Units. Package Machinery Co. DF, FA, FA2, FA2Q, FA4Q Wrappers. Hayssen 3-7, Miller Wrappers.

This is Only a Partial List
Tell Us Your Requirements.
UNION STANDARD EQUIPMENT CO.
318-322 Lafayette Street
New York 12, N. Y.

HELP WANTED

PLASTIC FILM TECHNICAL SALES: Progressive, independent producer of plastic film is seeking the services of a top-notch man for a top-notch position in sales and field service with particular emphasis on industrial and military packaging applications. A technical academic background is desirable but not necessarily essential. Full details regarding education, experience, salary requirements, military service status, etc., must be included in initial letter to qualify for consideration. An accompanying snapshot or photograph will be helpful and appreciated. Our own employees have been advised of this advertisement, and all replies will be treated most confidentially. Reply Box 231, Modern Packaging.

SALESMAN WANTED: Experienced Folding Carton Salesman wanted for Indianapolis and surrounding territory. Apply in writing to Consolidated Paper Co., Monroe, Michigan.

PACKAGE DESIGNER: Experienced and imaginative folding carton designer for package development work. Must be able to create cartons to meet customers' problems, as well as specialty packages. Attractive proposition for the right man, including royalty on specialty items developed. Empire Box Corporation, 17 East Chestnut Street, Chicago, Ill.

PAPER CONVERTING: We want the services of a man who knows how to supervise production and control quality of printed, coated, laminated and embossed papers. Experience with fluid and oil inks, coatings and adhesives is necessary. A working knowledge of chemicals and converting machinery will be helpful. There is an excellent salary and bright future for the right man in this job. If you are interested write, giving your complete work history and all other necessary details. All replies will be kept confidential. Our organization knows of this advertisement. Reply Box 239, Modern Packaging.

SALESMAN WANTED: Experienced Folding Carton Salesman wanted for Cleveland and Northeastern Ohio territory. Apply in writing to Consolidated Paper Co., Minroe, Michigan.

SALES MANAGER: Aggressive leader for Sales Executive to take over the active management of our sales force. We manufacture a complete line of folding cartons and many specialities. Excellent opportunity for right man with substantial salary and profit sharing arrangement. Our staff knows of this advertisement. Reply Box 241, Modern Packaging.

PACKAGING SALESMEN: All territories open on a new and patented transparent container. Shipped flat like the ordinary folding box at a price comparable to the ordinary box. You will be surprised at its simplicity and saleability. Commissions only. Exclusive. Reply Box 232, Modern Packaging.

UNUSUAL OPPORTUNITY: To set up and head a new division with a large aggressive plastic injection molder located in Chicago. We want a man with sales experience in the plain or fancy packaging field to introduce and develop the use of injection molded plastics to that field. Here is a challenge with an unlimited future and compensation to the right man. Reply Box 249, Modern Packaging.

PRODUCTION SUPERINTENDENT
CELLOPHANE CONVERTER

WANTED: Production Superintendent for converting plant. Must know top quality analine printing. Thorough knowledge of allied operations including bag making, sheeting, and work with glassine, foil, acetate, etc. desirable. Prefer man under 40. This strong, young, progressive company is strategically located for expansion, offering great opportunity for qualified man. Reply Box 245, Modern Packaging.

SALESMAN WANTED: Established progressive manufacturer of printed bags and wraps interested in obtaining preferably experienced salesman for representation Chicago area. Details of experience, desired salary, and availability should be included in reply. Reply Box 254, Modern Packaging.

WANTED: Chemist with extensive background in resins to develop barrier and color coatings for packaging. Must have machine application experience. This is a key position in our Development and Research Department. Polyethylene machine coating experience desired. Attractive salary. Midwest location near large city. Reply Box 255, Modern Packaging.

MISCELLANEOUS

BAG MACHINES WANTED: For making flat and square style cellophane, glassine, etc. bags—sizes up to approximately 12"x22". Submit pertinent details including make, model numbers, general specifications, age, price etc. Reply Box 243, Modern Packaging.

TRANSPARENT BAGS FOR SALE: Immediate delivery one million crystal-clear .003 rigid acetate bags 3x3½". A perfect package for a small item. Can package any sharp or irregular item as this material will not puncture or tear. All new bags in original cartons and priced at one-third cost. The Tape and Ribbon Co., P. O. Box #851, Atlanta, Georgia.

WANTED: Plastic scrap and rejects in any form. Cellulose Acetate, Butyrate, Polystyrene, Vinyl Polyethylene, etc. We pay top prices for clear, colored and printed scrap in any quantity. Reply Box 252, Modern Packaging.

WANTED: 1-Model A and 1-Model B Transwrap Machines; 1-S & S G-1 Powder Filler; Ceco A3901-12 Sealer; Jones Cartoner to handle 4 x 4 x 10. Reply Box 253, Modern Packaging.

WANTED TO BUY: Rotogravure Engraving Equipment—consider purchase of complete plant plating to finish cylinder. Reply Box 246, Modern Packaging.

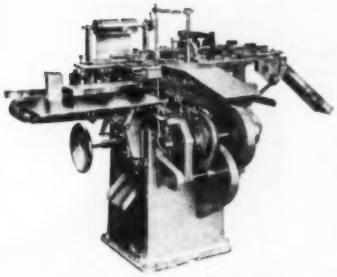
All classified advertisements payable in advance of publication

Up to 60 words.....$7.50	Up to 120 words $15.00	Up to 180 words.....$22.50
Up to 60 words (boxed).....$15.00	Up to 120 words (boxed)....$30.00	Up to 180 words (boxed).....$45.00

For further information address Classified Advertising department, Modern Packaging, 575 Madison Ave., N. Y. 22, N. Y.

A **COMPLETE** LINE OF

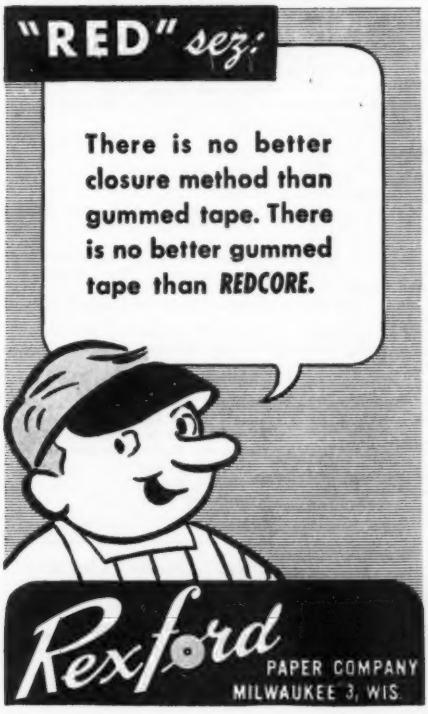
FILLING, SEALING, PACKING,
WRAPPING & COUNTING MACHINERY



- Bottle Filling
- Tube Filling and Closing
- Tablet Counting & Packing
- Carton Filling & Closing
- Cellophane Wrapping (for large & small packages)
- Wrapping & Boxing Soap Bars
- Forming, Filling & Sealing Bags & Packages
- Wrapping Ice Cream Sticks
- Making Tea Bags
- Wrapping chocolate bars, chewing gum, cigars, yeast, sliced or loaf bread.

Write Dept. A

PERL MACHINE MFG. CO.
68 Jay Street, Brooklyn 1, N. Y.


"RED" sez:
There is no better closure method than gummed tape. There is no better gummed tape than REDCORE.
Rexford
PAPER COMPANY
MILWAUKEE 3, WIS.

Famous Beer Labels Now Being Printed from SGS Cylinders!

Identifying America's finer beers requires finer labels. To produce these better labels, gravure printers of the famous labels shown above now have their gravure cylinders prepared by SGS.

Completed SGS Cylinders Delivered 3 Weeks After Order and Art Received!

In addition to finer, more accurately etched gravure cylinders, SGS completes its work in record time. Average delivery runs about 3 weeks from date of order . . . for every size cylinder . . . every process . . . even including chrome plating.

One-Stop SGS Service Assures Better Results!

Gravure printers furnish finished art and layout. SGS does the rest . . . all in one shop . . . returning cylinders for black and white or color . . . ready to run on any printable stock specified. For accuracy . . . for lower cost, long runs . . . for faster delivery . . . or for a repair job . . . try SGS! Details gladly submitted.

(SGS are NOT printers and have no financial interest in any printing firm.)

SOUTHERN GRAVURE SERVICE
Complete Gravure Cylinder Service
301 WEST MAIN STREET • LOUISVILLE 2, KY.

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Modern packaging

Published by Modern Packaging Corp.
575 Madison Avenue, New York 22, N.Y.

A BRESKIN Publication

"We are adding thousands upon thousands . . ."

FRANK M. FOLSOM
President, Radio Corporation of America

"By a simple person-to-person canvass, we are adding thousands upon thousands of serious savers to our Payroll Savings Plan. Our employees are eager to contribute to the strengthening of America's defenses while they build their own security. They know that individual saving initiative means a blow at ruinous inflation. They know that is the line on which all of us at home can make our strongest fight."

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MODERN PACKAGING

Eye-catching packages made of Monsanto Vuepak—for popular-priced apparel by I. B. Kleinert Rubber Co., New York—fabricated by Miro Container Corp., Inc., Brooklyn.

Shoppers turn their backs on bins ... to reach for products packaged in Vuepak

Used to be that inexpensive articles like these were found only in bins or "blind" packages . . . because they were thought to be unsuited for glamour-packaging in plastics.

No more, though! Booming sales records . . . and profits . . . of manufacturers like Kleinert have modified the "bin for popular-priced items" type of thinking.

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SERVING INDUSTRY . . . WHICH SERVES MANKIND

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Company _____

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MARATHON

for the newest and best in protective food packaging

For 40 years Marathon has served the food industry in a very special way . . . by meeting present needs *and anticipating* all *new* merchandising trends in protective food packaging. Count on Marathon for all current requirements . . . and be sure Marathon is *looking ahead* to pioneer new developments in food merchandising. Packages shown are examples of Marathon leadership.

1 For bakers—
Marathon End Labels . . . heat-seal quickly and firmly to all types of wrapping materials . . . placed at each end of the package to insure strong brand identification . . . and TYTON *Super Seal Bread Wrappers* . . . designed for more efficient machine operation: smooth-running, time-saving . . .

2 For ice cream manufacturers—
Linerless Ice Cream Carton . . . cuts production costs drastically . . . can be put in cabinets in much greater numbers . . . opens with an easy single motion . . . and *"Individual" Ice Cream Carton* . . . ideal "single-serving" package for self-service sales . . .

3 For cheese manufacturers—
Parakote Cheese Wrappers and Pouches . . . the first completely transparent wrapper for packaging either process or natural cheese . . . completely non-toxic, impervious to mold and shrinkage, will not discolor or impart objectionable flavor to the cheese. . .

4 For meat packers—
Pick Pak Contour Bacon Package . . . excellent for display purposes . . . easy for the dealer to handle, convenient for the homemaker to store . . . economical to wrap by hand or machine . . .

5 For frozen foods packers—
Mara-Pak Carton . . . the first high-speed, end-opening carton for free-flowing items. TYTON over-wrap provides full protection . . . takes excellent full-color roto printing.

For information *on Marathon's complete packaging service for the food industries, contact your Marathon salesman, or write direct to Marathon Corporation, Menasha, Wisconsin.*

MARATHON ***Protective Packaging for America's Finest Foods***

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HOW TO PACKAGE

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